



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>



10-11



•

•

•

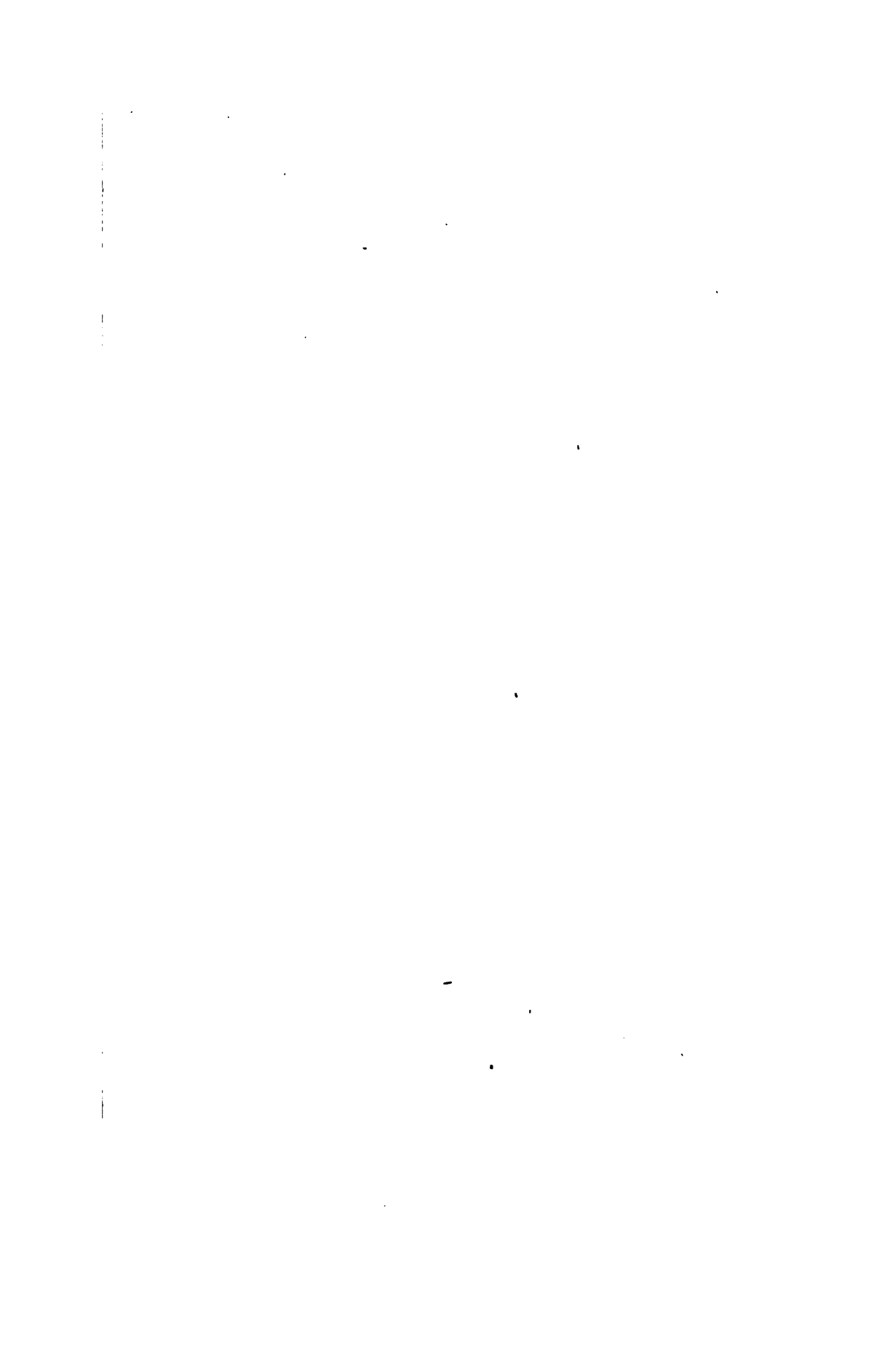
•

•

•

•





THE ANALYST;
▲
QUARTERLY JOURNAL
OF
SCIENCE, LITERATURE,
NATURAL HISTORY, AND THE FINE ART .

EDITED BY
EDWARD MAMMATT, Esq., F.G.S.,
&c., &c.

VOL. IX.

LONDON :
SIMPKIN, MARSHALL, & CO.
WHYTE & Co., EDINBURGH ; BARLOW, BIRMINGHAM.

1839.

TABLE OF CONTENTS

TO

VOLUME IX.

-
- I.—Sketch of the Geology of Derbyshire, with sections, 1.
- II.—Observations on the Animals inhabiting Multilocular Shells, with reference to their geological importance, *Article one*, 33.
- III.—A Natural History of *Cuculus canorus*, the Cuckoo, 50.
- IV.—Essay on the Origin and Date of the Phonetic Alphabet, 68.
- V.—Thoughts on Education, its principles and practical applications, 97.
- VI.—Historical Sketch of French Literature. *Article two*, the Troubadours and Rise of Chivalry, 105.
- VII.—The Musician about Town, 113.
- VIII.—Gentleness is Power; or the Story of Caranza and Aborsuf, 123.
- IX.—Proceedings of the Zoological and Botanical Societies, 148.
- X.—Critical Notice of Miss Burton's "Astronomy Simplified," 154.
- XI.—Outlines of Periodical Literature relating to the Natural Sciences and Philosophy.—Annals of Nat. Hist. 161; London & Edinburgh Philosophical Magazine and Journal of Science, 165; Phrenological Journal and Magazine of Moral Science, 168; Magazine of Natural History, and Journal of Zoology, Botany, Mineralogy, Geology, and Meteorology, 169; The Naturalist, 172.
- XII.—Meteorological Tables and Observations, 174.
- XIII.—Critical Observations on Bishop Burnett's History of the Reformation of the Church of England, *Article one*, 177.
- XIV.—Sketch of the State of Literature and Education in Denmark, previously to the Sixteenth Century; with notes and illustrations, 209.
- XV.—Geology of the Northern Part of Staffordshire, with sections, 233.
- XVI.—Observations on the Nature of Heat, 240.
- XVII.—Blanche de Beaulieu, a tale of the French Revolution, 247.
- XVIII.—Observations on the Species of *Zannichellia*, with illustrative figures, 262.
- XIX.—Observations on the Animals inhabiting Multilocular Shells; *Article two*, 274.
- XX.—Historical Sketch of French Literature, *Article two*, the Jong-

- leurs and the Compositions of the Troubadours, 285
- XXI.—The Musician about Town, 293.
- XXII.—Sketches of European Ornithology, Gould's "Birds of Europe," 303.
- XXIII.—Proceedings of the Linnean, Zoological, Entomological, Botanical, and Geological Societies, 318.
- XXIV.—Critical Notices of Muller's "Elements of Physiology," Elliotson's "Human Physiology," 329, Goring's "Microscopic Illustrations," 341; and Vigornensis' "Historical View of Vaccination," 343.
- XXV.—Outlines of Periodical Literature relating to the Natural Sciences and Philosophy.—Magazine of Natural History, and Journal of Zoology, Botany, Mineralogy, Geology, and Meteorology, 345; Annals of Natural History, 348; London and Edinburgh Philosophical Magazine and Journal of Science, 353; Phrenological Journal and Magazine of Moral Science, 355.
- XXVI.—Meteorological Tables and Observations, 358.
- XXVII.—Critical Observations on Bishop Burnett's History of the Reformation of the Church of England; *Article two*, 361.
- XXVIII.—Essay on the Character and Times of Robespierre, 385.
- XXIX.—Account of an Excursion of the French Geological Society, 409.
- XXX.—Il Bancolo, a Venetian Story, 423.
- XXXI.—The Stake, a Poem, in three Parts, 433.
- XXXII.—Observations on the Animals inhabiting Multilocular Shells, *Article three*, 452.
- XXXIII.—An Historical Sketch of French Literature, *Article four*, the Tensons and the Courts of Love, 467.
- XXXIV.—Sketches of European Ornithology, Gould's "Birds of Europe," 477.
- XXXV.—The Musician about Town, 493.
- XXXVI.—Critical Notices of Miss Twamley's "Our Wild Flowers familiarly Described and Illustrated," 502; Dr. Beaumont's "Experiments and Observations on the Gastric Juice and the Physiology of Digestion," 508.
- XXXVII.—Outlines of Periodical Literature relating to the Natural Sciences and Philosophy.—London and Edinburgh Philosophical Magazine and Journal of Science, 517; Magazine of Natural History, and Journal of Zoology, Botany, Mineralogy, Geology, and Meteorology, 520; Annals of Natural History, 523; The Naturalist, 527.
- XXXVIII.—Meteorological Tables and Observations, 530.

THE ANALYST.

SKETCH OF THE GEOLOGY OF DERBYSHIRE.

SECOND PART.

By J. B. JUKES, B.A. F.G.S.

HAVING, in the last number of *The Analyst*, given a slight sketch of each of the geological formations found within the county of Derby, I come now to the positions which they occupy, both absolutely and relatively to each other. This department of geological investigation has been correctly termed Physical Geology, and is that portion of the science which has the greatest practical importance in all mining or other operations in which a knowledge of the structure of any part of the earth's crust is desirable. Nor is its theoretical importance to the scientific geologist less than its utility to the practical man, since it is only by accurately cultivating this branch of the science that we can hope to arrive at the solution of those great dynamical problems which the disturbing forces that act upon the crust of the globe propose to our investigation.

In speaking of the geological structure of the Derbyshire district, it is necessary that we should reverse the order used in the preceding part of this paper, and begin with the lowest of the formations there mentioned, and, having thus got a base for our operations, proceed regularly in the structure of our edifice.

The reader, then, must please to imagine a substratum of mountain limestone, of the thickness and with the characters previously described, to exist over the whole of Derbyshire and the adjoining counties to the east, north, and west, for an indefinite and unknown extent, sometimes forming the surface of the country, at others buried to a great depth under other materials.* The greatest extent of

* That this is not a vain imagination will be shown presently.

surface formed by the mountain limestone is in the north of Derbyshire and part of the adjoining county of Stafford. If the reader will take a map in his hand, and draw an undulating line through the following places, he will get a rough notion of the extent of this district. Beginning at Burton, the boundary of the limestone runs nearly north to the small village of Dove Hole, thence, leaving Chapel-en-le-Frith about two miles to the left, proceeds just under Rushup Edge till it reaches Castleton. From Castleton it goes towards Hope, and then turns to the S. to Abney. From Abney it goes round Eyam and Stoney Middleton, and proceeds thence, by Hassop, to Ashford. From Ashford it runs close to the N. and E. of Bakewell, and proceeds by Haddon Hall to the Lathkill. Here it deflects to the W. following the course of that river till it meets the Bradford. It keeps along the eastern bank of the Bradford to its source, and then turns again to the E. by Gratton and Elton, runs just to the north of Winster and Wensley, and crosses the Derwent in Darley Dale. Hence it runs just at the back of Matlock High Torr, and recrossing the river at Cromford, continues S. to Wirksworth. From Wirksworth the boundary of the limestone turns due W. running by Carsington and Bradburn to Tissington, and thence, turning S. to Thorpe, crosses the Dove into Staffordshire. Here its boundary is irregular, but it includes the villages of Blore, Caldon, Waterfall, Grindon, Mixon, Butterton, and Ecton, and recrosses the Dove at Hartington. From Hartington, it runs up the E. bank of the Dove to Crowdygate and Glutton, then passes through Dowel to Thirkalow, and including Harper Hill and Burbage, arrives at Burton. The space enclosed in this irregular outline is occupied entirely by mountain limestone and its associated toadstone. The other places where this formation is visible at the surface would be marked on the map by an oval inclosing the village of Ashover, of about $1\frac{1}{2}$ m. long and $\frac{1}{2}$ m. broad, having its longer axis running about 20° N. of W. and the village in the northern part of the space; by a similar oval running nearly in the same direction, but of twice the length, with Crich about in its centre; by a small circle at Birchwood Park, 5 m. S. of Ashbourne; and by the larger district about Calke and Ticknal connected with the mountain limestone patches of Leicestershire, and mentioned in a former paper.

The condition of the first and principal district above mentioned will be best understood by imagining the rocks to have been originally horizontal at a lower level, and then to have been elevated by an expansive force acting from below, until they were swollen up, as

it were, into an irregular, low-curved, dome-shaped mass, with many great cracks and fissures intersecting each other at right angles; then a partial settling to have taken place, and some of the pieces divided by those fissures to have slipped below, while others were elevated above their previously common level. This will give a rough notion of the present broken and disjointed state of the mass, where, however, the fractures are clearly traceable to a common cause, and where the general inclination of the beds slopes on every side from the central position. That this is the general position of the beds may be seen by actual inspection. Along the western boundary some miles N. and S. of Buxton, the limestone dips everywhere to the W. passing regularly under the superincumbent strata. On tracing it towards Castleton, it first dips N.W. and about that place due north. Between Castleton and Bakewell the limestone has an easterly inclination; and the same general dip may be observed throughout the eastern boundary all the way to Wirksworth. The whole of this eastern portion, however, is very remarkable for the great folds or flexures exhibited by the limestone strata. Scarcely any portion is a perfect plane, but it is all bent into regular and alternate elevations and depressions, like mighty ridges and furrows, the sides of which dip respectively to the N. and S. while the whole, taken as a mass, dips invariably and sometimes rapidly to the east. Of these great corrugations, Matlock High Torr and the adjacent cliffs down to Cromford, expose very beautiful examples, the strata of each cliff, while viewed in front, dipping evidently, on either hand, from the summit of the hill to the bed of the river, or N. and S. respectively, while a cross section would show them to be, at the same time, dipping into the hill, or towards the E. at a considerable angle.* The remarkable curve of the boundary of the limestone between Winster and Youlgreave, is owing to this peculiar structure, increased perhaps by a positive dislocation. It is caused by a depression or downward curve of the limestone between these two places, the hollow being filled up by the superior rocks; the bottom of this hollow dipping, doubtless, to the E. while its sides incline to the N. and S. respectively.†

The dip of the beds along the southern boundary is not so regular

* The quarries at Matlock Bridge show this very clearly. The whole hill of Masson Lowe, of which these beautiful cliffs are but small portions cut off by the gorge of the river, would exhibit the same structure on a larger scale could its stratification be exposed.

† See section No. 2.

as that on the W. N. and E. as, for some miles west from Wirksworth, the limestone is cut off by a great fault, which causes a sudden downcast (instead of a regular dip) to the S. All the way to the Dove the limestone is much broken and disturbed, but whenever a dip is seen along the whole line between Wirksworth and Thorpe, it is, I believe, invariably towards the south. Having established the fact of the limestone dipping, at each part of its boundary, *from* the central portion of the district, and passing, for the most part, regularly under the superior strata, the next fact that would strike our attention is, that we cannot proceed far from the boundary towards the central position without coming abruptly to the edge of a precipice or steep slope, or, geologically speaking, an escarpment. This is a necessary consequence of the position of the rocks, since, as the beds *rise towards* the central portion wherever they are cut through by a fault, and the inside piece depressed, or a valley in any way formed, the broken edges of the beds must be exposed to view, and a steep cliff or escarpment formed. From the inclination of the beds, too, the escarpments on the western side must face the E. while those on the eastern side look towards the W.* This position of the escarpments and inclination of the strata, however, must be understood very generally, and does not hold good on advancing far into the limestone country, there being nothing like any well-defined central ridge or axis of the district from which the beds dip equally on either hand, all the central portion being broken through by faults, and everything like regularity of position destroyed. On looking at a map on which the outline pointed out before has been traced, it will be seen that the limestone district is narrowest in the middle, or between the Dove and the Bradford, while N. and S. of that tract it expands to a considerable extent. This middle tract is comparatively undisturbed, and I am not at present aware of any place between Hartington and Middleton, by Youlgreave, where the toadstone exists at the surface. In all the limestone district, however, north of this line, we continually find the toadstone either at the tops of the hills or the sides of the

* It would have been next to impossible, for instance, for a steep cliff to have been formed, like the Matlock High Torr, on the opposite side of the river, or with its face to the E. because, as soon as the ravine was formed, the beds which dip towards it on that side, being cut through, would be deprived of their support, and slide one over another into the valley: this, in fact, has, at some time, taken place, and the side of the hill opposite the High Torr is covered with broken ruins. The beds of the Torr itself, on the contrary, dipping from the ravine and into the hill, are supported, and can scarcely by any possibility fall into the river, unless deeply undermined.

valleys, and this sometimes so frequently, and in two or three places so near together, as to make it appear that it must belong to more than one bed. At Copt Round, for instance, between Castleton and Peak Forest, there is a bed of toadstone found at the summit of the hill; it appears again about half-way down, and again in the valley at the foot, and under such circumstances as would induce any one, at first sight, to suppose it to belong to three separate beds lying one under another. On a more detailed examination, however, these three pieces are found to unite towards the S. and become one, their disunion at Copt Round being produced by two faults. Similar circumstances are continually occurring over all this district, producing phenomena which it requires the greatest care and the most patient and laborious investigation to disentangle and reduce to order and connection. For want of this care and labour it was long the commonly received opinion that three separate beds of toadstone existed throughout the limestone district, till Mr. Hopkins did so much towards giving us better and more accurate information. Over all the country about Burton, Tideswell, and Castleton, he has shown that only one bed of toadstone is *at present known* to exist, and that its continued re-appearance at the surface is solely owing to faults and dislocations.* On approaching Bakewell, however, there are strong indications of two beds existing at Fin Copt Hill, near Ashford; and this is certainly the case in the valley of the Lathkill, as mentioned in the preceding part of this paper. On passing towards Winster and the S. part of the limestone district, two beds have been sunk through at Snitterton, and may be traced along the ridge between Winster and Wensley. I believe, also, that the toadstone in Masson Lowe and at Matlock High Torr belongs to two beds, although Mr. Hopkins gives an explanation of these, as also of Fin Copt Hill, on the supposition of one bed only. It is certain that all this district is very much broken by faults, which tend to complicate the phenomena very much, and render their complete explication a work of time, as well as of labour and sagacity. The continued storing of all the facts gleaned by mining operations will be necessary, and those facts can only be thoroughly arranged and investigated by some one who, like Mr. Hopkins, shall have been accustomed to the searching out of simple principles from a mass of complicated details. The toadstone is seen on the extreme southern border of the limestone, at the back of Hopton Hall, on a level with the shale, which sets in immediately

* See sections 1 and 2.

beyond it, giving evidence of a very great fault, which has suddenly depressed the whole of the first limestone and the lower part of the shale, and buried them out of sight to the S. of this fault. W. of this place, however, and over all the S.W. corner of the district, as well as in the limestone district of Staffordshire, no trace of the toadstone has ever been detected. This circumstance is probably due to the absence of any considerable faults. All the S.W. portion of the limestone district has been so acted upon by the disturbing forces as rather to be bent and twisted into great ridges and hollows than actually snapped asunder; or where broken this, there has not been any great elevation or depression caused at the line of fault, so much as a change of dip or inclination of the beds. Even the Dove does not cut deeply into the limestone, as the beds dip, upon the whole, towards it on either hand; and thus the first tendency to the formation of the valley was a downward curve of the limestone itself.*

However great the apparent irregularity and confusion to which the faults give rise, it is found, on carefully tracing them out and laying them down on a map, that they have themselves very great regularity, and evidently follow certain general laws. All the principal faults run for considerable distances, sometimes several miles, in directly straight lines, and have others crossing them at right angles.† The one set in Derbyshire run N. and S. and the others, of course, E. and W. When a fault running from the S. in one direction is crossed by another at right angles, the angle of rock included between the two is frequently lifted up, with a steep face on either side; or when two faults running parallel to each other are crossed by another, the included piece is either elevated or depressed at the cross fault, and the other end affected in an opposite direction, and thus the piece made to sway, as it were, on a central axis. Priestcliff Lowe is an example of this latter case. A valley is frequently bounded by a fault on either hand, the two running parallel to each other; but it is very remarkable that these faults seldom coincide with the sides of the valley, but run at one or two hundred yards distance from it, the whole mass between them having been let down together, and thus, probably, a depression caused which gave the first tendency to the

* The river frequently cuts through beds having the same dips on either side, but the position of the strata in the great mass of the hills I believe to be that mentioned in the text.

† For by far the greatest part of the information respecting the faults and veins of Derbyshire, I am indebted to Mr. Hopkins's pamphlet before mentioned.

formation of the valley. Of this circumstance, Monk's Dale, the valley of the Wye in what are called Miller's and Mousal Dales, Lathkill Dale, and Bousal Dale, are admirable examples. One of the most interesting circumstances respecting the faults is their connection with the mineral veins. All the principal lead veins in Derbyshire are connected with faults, which run parallel to them at a little distance; and as a general rule the vein is on the upcast side of the fault. The direction of the veins, moreover, is the same with that of the faults, one set running N. and S. the other E. and W.—While, however, the principal faults run N. and S. the most regular and continuous veins have an E. and W. direction. Some of the E. and W. veins have been traced for many miles without any real termination having been reached. Of these, the principal are the Yoke-cliff, running through Wirksworth; the Longrake, whose line passes S. of Haddon Hall and Mony Ash, and which has been traced into Staffordshire; the Mochsah vein, S. of Bakewell; the Deep Rake of Longstone Edge; and the High Rake, the Moss Rake, and the Dritton vein, between Tideswell and Castleton. The E. and W. veins are generally comparatively narrow, but preserve their width throughout their course, and contain a great quantity of ore. The N. and S. veins, on the contrary, are more irregular, sometimes widening to three or four yards, and then closing, and apparently, perhaps, ending, again to open out in another part of their course. Their contents, too, are very irregular, being sometimes very rich, and at others containing nothing but spar, or not unfrequently fragments of rock and broken rubbish, in which merely detached pieces of ore can be discovered. To all these evidences of mechanical origin it may be added that a vein is itself sometimes a fault, the beds on opposite sides of it being shifted from their original common level.

All these facts accord very well with the theoretical results deduced by Mr. Hopkins* by mathematical analysis, from the examination of the problem "What would be the effect of the action of an elevating expansive force upon a homogeneous mass of rock, of indefinite thickness and longitudinal extent, and bounded laterally by parallel lines." He has shown that this effect would be the production of great longitudinal fissures running parallel to each other in straight lines, and having others at right angles to them. The direction of these systems of fissures would be determined by the directions of the principal tensions of the mass. That the principal fissures would be at

* See his paper in the *Transactions of the Cambridge Philosophical Society*.

right angles to the principal tension, and parallel to the axis of elevation. That the fissures, likewise, would not begin at the surface, but at some point beneath it; and that those which are parallel must be necessarily contemporaneous in their origin. That subsequent movements would be likely to convert the longitudinal fissures into faults, producing considerable relative displacement of the beds on either side of them, and might cause the fissure to be very irregular in its width at different points; that the width of the transverse fissures, on the contrary, would be likely to be more regular, and the relative movement of the beds on either side of them to be less.

Now, applying these general results to the particular instance of Derbyshire, we know the axis of elevation of this district to be a north and south one, because it belongs to an elevated ridge which stretches away to the N. as far as the borders of Scotland; and we have seen that the chief faults and most irregular veins have a N. and S. direction, while the E. and W. veins, on the contrary, are remarkably regular. From all these circumstances it is clear that faults and veins are both due to a mechanical cause; that they are, in fact, both fissures produced by the same cause and at the same time, during the general elevation of the district. That a fault is a fissure generally devoid of minerals, on opposite sides of which the beds are relatively displaced; that a vein is a fissure producing generally little displacement, but filled with minerals in a state of greater or less purity and crystallisation. In what way these mineral substances gained their present position, we must probably have recourse to the chemist to resolve. That they were not placed there by mechanical causes, as was at one time supposed, is certain; because in Derbyshire the toadstone almost invariably continues across the vein, completely cutting off the connection between the parts above and below. If, then, the veins had been mechanically filled from above, they ought to be empty below the toadstone; if from below, the part above the toadstone would contain no minerals. It is evident, moreover, from the veins of this and other districts, that the quantity and quality of the minerals in a vein very greatly depend upon the kind of rock which composes its sides, making it probable that these minerals have been, in some way, segregated from the adjoining rock into their present position. This subject is, however, at present beset with difficulties. We come now to the next superior rock,

THE LIMESTONE SHALE.

The E. and W. sides of the limestone district are bounded by a narrow valley worn out in the soft beds of the shale, which on the one side reposes regularly on the limestone, and on the other rises half way up the hills, and supports the millstone grit.—(See sections 1 and 2). This valley varies in width from $\frac{1}{2}$ m. to 2m. according to the greater or less extent to which denuding forces have acted upon it and its gritstone covering. Occasionally, however, there is no valley, but a hill of shale rising abruptly from the hill of limestone on which it rests; or it is not unfrequent to find a hill of shale rising out of the valley, and protected by a cupping of millstone grit. It, of course, every where partakes of the inclination of the limestone below it, and must be affected by the same or similar faults. Where, however, the solid beds of the limestone have been snapped clean asunder by the dislocating force, the softer beds of the shale are often bent and contorted in the most singular manner. In these lateral tracts, however, the shale seldom shows anything of remarkable interest. In the part N. of Castleton, the most remarkable spot in the shale, is the well-known hill called Mam Torr, or the Shivering Mountain, which is a hill of shale resting upon limestone, and being very precipitous, especially on one side, the action of the weather has continually undermined and worn away the loose and crumbling materials, until a great natural excavation has been formed, to which each successive winter makes additions, while the ruin lies scattered at its foot. The line of hills between Castleton and Eedale consists chiefly of this formation, whence it stretches away to the N. with many minor corrugations and changes of dip, but on the whole nearly horizontal, forming, as it were, the base of the country for the support of the masses of gritstone. The valleys all cut down deeply into the shale, frequently exposing faces that exhibit its alternation with, and gradual passage into, the millstone grit. If we go to the S. of the limestone district, we find the shale spreading out, and occupying nearly all the country between Wirksworth, Derby, and Ashbourne, north of the boundary of the new red sandstone. Over this tract its position is remarkable, as it is bent up and down, in every direction, into great curves; but the scarcity of natural or artificial sections renders it rather difficult to make out. On the E. it may be seen going down from Wirksworth, below Ashley Hay and Shottle, to Milford, dipping every where to the E. under the gritstone. At Milford its dip is

rather N.E. as may be seen by the examination of the tunnel of the North Midland Railway; and it no doubt preserves the same dip, as it crosses the Derwent, and runs below Little Eaton to Breadsall. In Breadsall brook it may be seen greatly disturbed, no less than ten changes of dip occurring within about $\frac{1}{4}$ m. the angles of inclination varying from 20° to a complete perpendicular. At Breadsall it becomes concealed by the new red sandstone. Crossing to the W. side of the valley that comes down from Wirksworth to Duffield, the shale may occasionally be seen dipping rapidly to the W. more especially about Ideridge Hay, and thence to Wirksworth. In the small valley that runs down from below Wirksworth to Hopton, the shale dips to the S. and the effect of this depression to the W. and S. is, to bring in a patch of gritstone resting upon it about Kirk Jreton. From underneath this, however, it soon rises again with a dip towards the N. and this is continued till the lower beds appear at Flower Lillies, near Turnditch, all beyond this is obscured by new red sandstone and diluvium; but we get the upper beds again, where it alternates with the gritstone, within the boundaries of the new red sandstone, at the back of the Royal Oak at Langley.* Here, likewise, it dips to the N.E. at an angle of 15° ; so that one or two changes, and probably some faults, must be concealed by the overlying beds between here and Turnditch. On tracing the shale to the W. we find it between Atlow and Kniveton, rising up into a round hill of very considerable elevation, called Atlow Winn, at the S. end of which, at a place called Agnis Meadow, beds the same as those of Turnditch are worked for their limestone, and the most extraordinary twistings and contortions of the strata are exposed. Even the solid beds of limestone are bent into regular curves, and bear the appearance of arched masonry. Its general dip here appears to be towards the S., whence it shortly gets concealed by the new red sandstone. A quarry, apparently in beds similar to these, was formerly worked at Wild Park, near Brailsford, but no face is now exposed to give us any information as to the position of the strata. From Agnis Meadow it lies pretty level all the way to Ashbourne, but at Ashbourne Green it dips 30° N.E. and immediately beyond is concealed by new red sandstone.

* In speaking of the "red and white sandstone," in the former part of this paper, I believed, from some detached specimens I had seen, and from its position within the borders of that formation, that this quarry belonged to it. On seeing the quarry itself, however, it was immediately evident that the beds belonged to the upper part of the limestone shale, or lower part of the millstone grit. Horizontal new red sandstone may be seen in the road close behind it.

THE MILLSTONE GRIT

Is the next formation in the ascending order, lying immediately above the shale, and forming generally a high, bare tract of moorland between the limestone country and the coal-fields, of greater or less extent, according to circumstances. It composes some of the greatest elevations in the county. Axe Edge, near Buxton, from which four rivers take their rise, has an altitude of 1875 feet above the sea, and Kinder Scout, and some of the hills in the Woodlands, have probably a still greater height. The same general position is preserved by the millstone grit, which has been described as belonging to the inferior rocks. The hills about Buxton and Chapel-en-le-Frith dip towards the W. and bury themselves in that direction beneath the narrow strip of the Cheshire coal-field, while their steep edges or escarpments face to the E. overlooking the shale and limestone below.—(See section No. 1). In the northern part of the district, the gritstone follows the position of the shale, and dips at first from the limestone towards the N. but soon becomes nearly horizontal, and stretches away into Yorkshire.—(See section No. 2). All the northern corner of the county (which goes by the name of the Woodlands) exhibits the characters of the millstone grit to perfection. It forms a large plateau at a great elevation, furrowed in every direction by deep vallies, which cut right through it and down into the shale below, and thus produces a great complicated cluster of high flat-topped hills. These are, for the most part, abandoned to their native heather, which clothes their sides with its brown and purple covering, while their summits are occupied by wild and almost impassable morasses. Lines of dark embattled crags and steep precipices of gritstone overlook the valleys, producing scenery of a stern and dreary, yet impressive, character.* A line of similar moors runs down the E. side of the limestone, between it and the Derby coal-field, the gritstone here having an easterly inclination, which, in a few miles, causes it to plunge beneath the latter. On tracing this branch of the millstone grit, however,

* The view from Ashop Head, the northern extremity of Kinder Scout, can hardly be surpassed for wild grandeur, an apparently illimitable bog stretching away on the one hand, while on the other you look, from among the massy rocks of gritstone, down a precipitous escarpment, on the little river Ashop, winding in its narrow dale a thousand feet below, beyond which nothing can be seen but moor after moor, alternately rising and falling, like the swell of a mighty sea.

towards the S. its elevation gradually becomes less, and the tract of country occupied by it less conspicuous, till it is entirely concealed by the new red sandstone at Morley, four miles N.W. of Derby. Its boundary will be approximately marked by that of the limestone as far S. as Wirksworth, whence it runs S.W. to Milford and Little Eaton. W. of this boundary, however, there is an outlier of it, as already indicated, lying in a depression of the shale, and on which the villages of Callow and Kirk Ireton stand. This isolated patch is surrounded on every side by shale, and is about three miles long from N. to S., and about $1\frac{1}{2}$ m. across. Its beds dip on all sides towards its central portion.—(See sections Nos. 2 and 3). The diminution in consequence of the millstone grit towards the S. does not seem altogether due to its diminution in elevation, but in part to a gradual thinning out and diminution of the formation itself, which is in accordance, I believe, with what is known of it in its course to the N. Before leaving this formation, there is a circumstance connected with this eastern part of it which demands our attention, which is, its being broken through in two places, and the inferior rocks brought up to the surface. These two places are Ashover and Crich. On leaving Matlock to go to Chesterfield, we perceive at Matlock Bridge the limestone dipping to the E. and passing under the shale which composes the next hill. This hill is capped with gritstone, which likewise dips to the E. but, instead of plunging regularly beneath the coal-field, in about three miles the wood reaches an abrupt escarpment, where the gritstone may be seen dipping rapidly to the W., and overlooking the valley of Ashover. This lovely valley is formed by an amphitheatre of gritstone hills opening to the S. and dipping from the valley on either hand. Beneath the gritstone, which, as usual, forms a very steep slope, with projecting crags, comes the more gradual outline of the shale, while the middle of the valley is occupied by a green ridge of limestone. The beds of this limestone dip from the centre on every side, at a moderate angle, passing underneath the shale, which, by a similar dip, underlies the gritstone. The heights of gritstone have an elevation of about 500 feet above the little river Amber at the bottom of the valley, which is there itself 500 feet above the sea, and which, to complete the loveliness of the place, and, as it were, to render it an epitome of the Derbyshire district, cuts transversely across the limestone ridge, producing the usual beauties of a limestone dale in miniature, and engrossing the toadstone for a considerable distance. Many lead veins traverse the limestone, which, upon the whole, preserve the same laws of direction that have

been remarked before, one set running N. and S., the other E. and W. one of the latter—the Gregory vein—was very remarkable for its richness, and has been followed for a considerable distance under the shale and gritstone hills to the W. at one shaft 360ft. of gritstone and nearly 500ft. of shale having been sunk through to reach the first limestone.* All the known veins are now worked out as far down as the toadstone, but should the difficulties attending the piercing of that rock in this situation ever be overcome, it is probable that mining operations will be resumed here with the same success as heretofore. To the E. of Ashover the millstone grit resumes its regular easterly dip, and very shortly passes beneath the coal-field. About five miles due S. of Ashover stands the village of Crich, on another still more remarkable upthrow of the limestone. This, instead of being a patch of limestone in the bottom of a valley, is a bold hill, overlooking all the adjoining gritstone, and commanding a magnificent prospect over the country to the S. and E. The height of its summit is upwards of 600ft. above the level of the Derwent close by, or probably between 1100 and 1200 above the sea. The limestone here forms a ridge about three miles long, and never more than $\frac{1}{2}$ m. across. The northern part of the ridge is by far the highest, and it slopes regularly down to the S. It may be said to consist of two parts, the one to the N. of the village, which runs magnetic N. and S. the other on which the village stands, the direction of which is about true N.W. and S.E. There is a slight curve in the strata between these two parts, as the beds immediately N. of the church dip N. while just beyond, where the lanes part, they dip S. There are, therefore, two points in the ridge from which the beds dip every way, the pillar called the stand marks one point nearly, while the church is about on the other. On the N. E. and S. of the ridge, the dip of the beds is moderate, varying from 10° to 30° , and passing regularly under the shale, which, again, is overlaid by the gritstone, both dipping every way *from* the hill. On the W. side, however, there runs a great fault, the direction of which is 23° W. of N. which cuts through a portion of both parts of the ridge, and passes through the market-place of Crich. Just to the W. of the church it brings down the gritstone close to the limestone, the shale being dropped out of sight; while W. of the stand it cuts through the limestone, and causes its bed there to dip to the S.W. at an angle of 65° .† At a greater

* The variations in the thickness of the toadstone here were noticed in the first part of this paper.

† This fault certainly produces a downcast to the W.; but at one or two

depth, indeed, it tilts the strata quite over ; and where the Ridgway sough, which comes up from the Derwent, first strikes the limestone, the shale is dipping into the hill, or towards the E. instead of the W. with the limestone bent back overhead. A little farther N.W. the Pearson's Venture drawing-shaft, after sinking down through part of the shale into the limestone, they, in continuing the same shaft afterwards, pierced through the limestone and got into the shale again, showing the beds to be in the remarkable position given them in the section No. 3.

Crich cliff has long been celebrated for the number and richness of its lead veins. As might be expected where such violent disturbances have taken place, nearly all trace of regularity in the direction of these is lost. In fact, they cross each other at all angles, and run towards every point of the compass. It is remarkable, however, that they all hade (or dip) into the hill, the plane of the vein keeping as nearly as possible perpendicular to that of the beds ; thus all the veins have a tendency to intersect each other in the centre of the hill, and many of them are found to do so, and I believe that some of those which run parallel to each other at the surface unite when they intersect, and do not again separate. It was in Crich cliffs that the first experiment of sinking through the toadstone was attended by success, in the discovery of the Glory Vein by Mr. Alsop. There seems to be some irregularity either in the number of beds or in the position of the toadstone at Crich, as the following sections of shafts, only a few hundred yards distant from each other, show :—

GLORY SHAFT.

Limestone, containing three thin beds of clay.....	38 fathoms
Toadstone*	8 do.
Limestone, to a clay called bearing clay	37 do.

Below which the sinkings were continued some depth without finding any toadstone.

places where I examined it in the Pearson's Venture Mine it was trading to the E. in which case it would form a very rare exception to an almost universal rule of considerable practical importance, "that a fault always trades or dips *under* the downcast part."

* In one part of the Glory Vein this bed of toadstone appears to have disappeared, leaving only two thin beds of clay in its place.

OLD END SHAFT.

Limestone	32 fathoms
Toadstone	8 do.
Limestone	26 do.
Toadstone	6½ do.

I was informed that one of the clays in the upper limestone of the "Glory" shaft thickened out towards the E. and became toadstone at the "Old End;" a circumstance which is believed also to take place in other parts of the limestone district, but which requires farther confirmation before it can be received as an ascertained fact. Many circumstances, however, unite to make some such irregularity probable, with regard to the upper toadstone at least.* The circumstance of portions of the mountain limestone being brought up to the surface wherever forces of disturbance have acted in a sufficiently powerful manner to break through the superincumbent rocks, is important, as showing us the continuity of the limestone formation; that it is not a mere patch existing only in that part of the district where it forms the surface of the ground, but that it extends under the adjacent country for some miles at least, without losing one of its usual characters, or at all diminishing in thickness or other qualities.

THE COAL MEASURES

Are the next group of rocks which engage our attention. They are, indeed, as before shown, only the upper part of that group of which the millstone grit is the lower, the division being one purely of convenience. It must necessarily happen, therefore, that the position of the one is in accordance with that of the other. Thus, on the W. of the county, where the millstone grit dips to the W. the coal measures of which it forms the base dip likewise in that direction. Of the narrow coal-field on the Cheshire side, this general position of the beds is all I know. On coming to the eastern tract of gritstone, we find, in like manner, when it passes beneath the coal-field, that the coal measures have likewise an easterly inclination. This easterly dip of the coal measures is true of the whole of the Derbyshire and

* The inquirer must be cautious in receiving the accounts of the common miners, as they not unfrequently call all clay lying between beds of limestone toadstone, because that rock is itself generally accompanied by clay.

Nottinghamshire coal-field in a general sense; but were it continued without interruption the district would have scarcely half its present width, since the whole of the beds would shortly be buried beneath superior strata. It fortunately happens, however, that there is a considerable flexure of the beds running down the middle of the district, caused by a line of elevation, which runs down from a little to the E. of Chesterfield, by Codnor, and thence, along the valley of the Erewash, to Stapleford. Along this line the beds have been bent up, so as to incline from it on either hand—(see section No. 1)—forming what is called an anticlinal line. By the effect of this line of elevation (which passes in the district under the name of the horseback fault) the beds, which had plunged to a considerable depth from their western boundary, are again brought up, or nearly so, to the surface, again to dip to the E. a little beyond; and thus a much greater quantity of coal than would otherwise be the case is kept within reach, and the width of the coal district greatly increased. Besides this remarkable dislocation, there are many other faults running across the coal-field. Some of these have a throw, as it is called, or produce a displacement of the beds to the amount of 270 feet, this amount gradually diminishing, in certain directions, till the fault either disappears or is crossed by another. It is very remarkable, and confirmatory of the views before taken of the elevation of the district, that the principal of these faults, as well as the anticlinal line mentioned above, run nearly N. and S. while others cross them in an E. and W. direction. It seems to be generally the case that, in the N. and S. faults, the beds on the E. side of the fault are those which are depressed, which, when the beds dip towards the E. has the effect of bringing the higher coals more to the W. or further into the field than they otherwise would be, which is another advantageous circumstance. Mr. Gratton, of Clay Cross, has published a map of considerable accuracy (as far as my examination has gone) of the outcrops of the five principal beds of coal, and several of the principal faults, but which requires some farther information to render it easily intelligible. The colours he uses represent the coals to which they are attached in the following section, the yellow to the E. of his map being the magnesian limestone, and a patch of green in the N.E. corner being a superior coal to any worked in other parts of the county.

		yd.	ft.	in.
Blue.....1.	Upper hard coal	1	2	0
	Bind, &c.	180	0	0
Brown.....2.	Main soft coal	1	1	0
	Bind, &c.	16	0	0
Pink.....3.	Deep hard coal	1	1	0
	Bind, &c.	55	0	0
Yellow? ...4.	Furnace coal	1	0	0
	Bind, &c.	50	0	0
Black?.....5.	Clod coal, variable, average.....	2	0	0
	Bind, &c.	150	0	0
—————6.	Buckland Hollow coal, or Morley Park } new coal	1	0	0
		459	1	0

A considerably greater thickness exists, but these are the beds best known. The upper hard coal lies at a depth of 37 yards in the neighbourhood of Ripley, while in the Shipley basin it has a depth of 60yds., both these places being rather on the western side of the coal-field, and shewing, therefore, how narrow it would be hereabouts were it not for the effect of the anticlinal line, since on the E. side of the coal-field the magnesian limestone rests almost immediately on this same coal.

If now, disregarding the minor variations, we look to the general dip of the coal measures, we shall find it to be to the E. till after a certain distance they are covered in that direction by the overlying magnesian limestone. The boundary of this formation will be marked on a map by a line drawn from Pebley Inn, in the N.E. of the county, round the W. side of the village of Barborough, and thence nearly due S. to Bolsover and Hardwick Hall. Here it enters Nottinghamshire, and proceeds, with a very irregular outline, by Teversal, Sutton and Kirkby in Ashfield, Annesley, Watnall, and Nutthall, to Strelley. From Strelley the line turns to E. by Bilborough to Radford. Along all this line the coal passes, with an easterly inclination, under the magnesian limestone, which has likewise a dip to the E. and thus, at first sight, the two formations appear perfectly regular and conformable. Upon an enlarged examination, however, this will be seen not to be the case. In the first place, the angle of dip of the coal measures sometimes varies, while that of the magnesian limestone

* This thickness increases towards the west to more than 30 yards.

remains the same. In the next place, seams of coal, which in some places are covered by the magnesian limestone, in others come out from underneath it, and have a great extent of other beds intervening between them and the course of the limestone, thus showing the strike, as well as the dip, of the two formations to be unconformable.* Lastly, many of the faults of the coal measures run up to the magnesian limestone, and affect the beds beneath it, without producing any alteration on that rock itself. The coal measures have frequently been traced under the magnesian limestone, but to what extent they go is left at present entirely to conjecture. The coal-field is bounded to the S. by a very irregular line, which runs from below Radford Church S. to Wollaton Park, then turns to the W. and runs close to the N. of Wollaton Church, and, after encompassing the village, returns to the S. nearly as far as the Nottingham and Derby road. Here it again turns to the W. and runs along the N. side of the Bramcote Hills to some quarries near a bridge over the canal, a little E. of the village of Trowel. From this point it returns again along the S. side of the Bramcote Hills, and through New Stapleford down to the old village of that name. Here it crosses the Erewash, and runs up its western bank, passing to the N. of Sandiacre into the village of Stanton. From Stanton it runs along the ridge between that place and Dale Abbey, from the W. end of which village it turns N. as far as the Spondon and Kirk Hallam road, when it turns short again to the S. and runs along the western side of that road into Locko Park, whence it runs N.W. to Morley. Along the whole line of country between Nottingham and Morley the beds of the coal measures still preserve their general easterly dip, but on approaching the southern boundary they invariably get a little bent up in that direction, so as to dip to the N.E. and consequently to basset or come to the surface towards the S.W. and this they would always be seen to do, were it not for the overlying beds of the new red sandstone. It is the common opinion that a great fault runs E. and W. from Nottingham to Stanton, and from Stanton to Breadsall; and this is marked in Mr. Gratton's map by straight lines in those directions. This opinion, however, requires some modifications. No great fault, in the common acceptation of the term, has ever been reached by the workings, and in many places the beds continue, without the inter-

* The strike of a bed means the direction of its run across the country, and is at right angles to its dip, or direction downwards into the earth.

vention of any considerable fault, to the S. of Mr. Gratton's lines, as, for instance, the coal found between the Bramcote Hills and Stapleford, and the Dale Abbey coal, the outcrop of which has been traced into Locko Park. Since, however, the beds rise to the S.W. it is evident that some great alteration must take place in that direction, or we should have the millstone grit rising into lofty hills to the S. of the coal-field, as it does on the west ; but from all the circumstances of the case it appears probable that the beds are depressed to the S. rather by several minor dislocations or changes of dip than by any sudden and violent disruption. In order to understand these circumstances better, let us first consider the position of the overlying beds of the

NEW RED SANDSTONE FORMATION.

The magnesian limestone, the lowest bed of this formation in the district, and the W. boundary of which has already been marked out, has, where it runs through Derbyshire from Barlborough to Hardwick Hall, a fine terrace* or escarpment facing to the W. and consisting of from 50 to 100 feet of the limestone, resting on a ridge of coal measures, which it has protected from the action of denuding forces. It has a very slight inclination to the E. which, in the course of a few miles, buries it beneath the superior beds of the red and white sandstone. Near Clown a portion of the magnesian limestone has been sunk through, and coal worked beneath it ; but these operations will not pay hereabouts until the neighbouring coal-field shall

* Projecting portions of this terrace have been seized upon as the sites of the fine old mansions of Bolsover Castle and Hardwick Hall. Annesley Hall, likewise, is near the edge of this formation, and the character of the country is admirably described by Byron in his " Dream :"—

" A hill, a gentle hill,
Green, and of mild declivity, the last
As t' were the cape of a long ridge of such,
Save that there was no sea to lave its base,
But a most living landscape, and the wave
Of woods and cornfields, and the abodes of men
Scatter'd at intervals, and wreathing smoke
Arising from such rustic roofs ;—the hill
Was crown'd with a peculiar diadem
Of trees, in circular array, so fix'd,
Not by the sport of nature, but of man."

have become more nearly exhausted. On tracing the formation into Nottinghamshire, it evidently becomes thinner as we proceed S. until about Nuthall its thickness does not exceed 30 feet; hereabouts it has been continually pierced, and the upper hard coal extracted from beneath it to a considerable extent. Between Nuthall and Bilborough, near a place called Chilwell Dam Farm, a small valley, through which a trifling brooklet runs down to the river Leen, cuts entirely through the magnesian limestone for 300 or 400 yards, and exposes a small patch of coal measures,* everywhere surrounded by magnesian limestone; and on the S. boundary of the formation, between Bilborough and Radford, it thins out entirely, not more than one yard of it having been met with in the coal pits to the S. of the road from Nottingham to Strelley. The extreme thinness of the magnesian limestone is, no doubt, partly due to denudation, some of the upper part of it having been washed away; but that it never was thicker than 20 or 30 feet at this end of its course, may be seen by tracing the run of the next superior beds, the red and white sandstone. The western boundary of this formation runs from about Worksop Manor, down through Cuckney, to the E. side of Mansfield; thence it gradually trends to the W. and at Annesley it actually overlies the whole of the magnesian limestone to its extreme edge, so that they both may be seen in one escarpment. From Annesley it recedes again to the E. runs round Newstead Abbey, and thence through Papplewick, and a little E. of Bulwell to Bassford and Radford. From Radford its course is that mentioned before as the S. boundary of the coal-field. Beyond this, its general course, however, there are some outliers of it near the escarpment of the magnesian limestone. Of these, Kimberley Knole is one, and another may be seen in Strelley Park. Beneath these we may be sure we have the whole thickness of the magnesian limestone, unless (which is highly improbable) the two should be unconformable, and this thickness is certainly not more than about 30 feet. The entire absence, moreover, of magnesian limestone in the new red sandstone district to the S. renders it probable that it thinned out and ended originally about its present southern boundary. This being the case, the existence of outliers of red sandstone lying but a little distance above the coal measures, and within the district where coal

* In the cutting of the new railway to Babbington Colliery the base of the formation is exposed, and contains some beds of a brown conglomerate, in which are large pebbles of mountain limestone, with crinoidal remains.

is got, prepares us to expect to find the same formation lying, in a similar manner, more to the S. upon the coal measures themselves, without the intervention of any magnesian limestone. One outlier of this kind forms a small hill to the S.W. of Strelley; it consists of fine, red, soft sandstone, capped by a hard, dark conglomerate, exactly the same as that of the Bramcote Hills, which also consist of red sand at their base. On the W. side of this hill, near Shaw's plantation, a coal pit was sunk through 20 yards of the sandstone, which may be traced to the S. lying immediately on the coal measures, as far as Trowell Moor, where it has thinned out and disappeared. From an examination of the country, it is evident that the beds of this outlier once stretched entirely across the valley through which the canal goes down to Nottingham, and that the outlier itself was a continuous part of what are now the Bramcote Hills, and that all the Wollaton coal-field was then covered by new red sandstone, from Radford to Bramcote and Strelley. If, moreover, we examine the very irregular boundary line of the new red sandstone along the south of the coal-field, we shall see that that formation must have once covered more of the coal-field in that direction than it does at present. In either case there is proof of great denudation, and that large portions of the new red sandstone have been swept off and washed away, leaving the coal measures exposed at the surface. The mere presence, then, of new red sandstone where we now find it, by no means argues the necessity of their being no coal underneath, nor that of any great fault separating it from the coal measures; and it is almost certain that many of the present workings will be carried on, to a slight extent at least, underneath the new red sandstone, and beyond what is now conceived to be the boundary of the beds.* It would be unwise, however, in the present state of our knowledge, to set on foot any undertaking (other than a mere extension of the works now going on) in search of coal to the S. of its present known boundary, since the new red sandstone so entirely masks the beds as to reduce us to mere conjecture as to their position. If now we trace on the boundary of the new red sandstone, from where we left it at Morley, we shall find it running to the S. as far as Breadsall, and thence crossing the Derwent to Darley and Allestree. It then passes by

* As, for instance, at Trowell Moor, the beds which they are now working, basset, I believe, either under the Bramcote Hills or even to the S. of them. A very pretty instance of new red sandstone lying horizontally on an inclined coal grit may be seen in a quarry by the canal side, near Trowell.

Quorndon, and keeps along the ridge that runs from that village towards Turnditch, where it may be very well seen at the top of the hill, by the Cross Hands. Hence it runs by Hulland and N. of Bradley to Ashbourne. All the country (except one or two spots to be mentioned presently) to the S. of the line now pointed out as running from Nottingham to Ashbourne, as far south as the Trent at least, and often farther, consists of one member or other of the new red sandstone. The first or uppermost, "the red and white marls, with gypsum," keep in general to the S. of the Trent, but cross it at one part, and form the rock next below the surface all about Chellaston. Marls and sandstones, lying immediately beneath the gypsum beds, stretch over all the S. of the county towards Burton and Uttoxeter, and are also found about Derby and Chad-desden; but the country between Nottingham and Locko Park, as also between Kedleston and Ashbourne, is formed of the second division, the red and white sandstones. This rock is, sometimes a deep red, sometimes yellow or nearly white, and sometimes mottled; it is occasionally a soft, friable sand, sometimes a hard rock, frequently full of quartz pebbles, which, according to the state of the rock in which they lie, are either loose, like gravel, or compacted into a hard conglomerate. These pebbles have sometimes so little sand among them as to seem precisely like a recent gravel; but, from several circumstances, I believe much of this gravel to belong really to the new red sandstone formation. In the first place, there are *no* chalk flints or pebbles of any rock newer than the new red sandstone. In the second place, it is generally found on the summits of hills, and it is almost invariably within the borders of the new red formation, into which it often passes by insensible gradations.* It is seen chiefly along the northern border already mentioned, and on the S. bank of the Trent, about Repton. The dip of the beds of the new red sandstone is, for the most part, insensible to the eye; there is no doubt, however, that they have a gradual inclination, by which the one part is brought to pass beneath the other. From the comparative irregularity, however, of the formation, it sometimes happens that parts of it are wanting, and that the presence of the superior beds by no means absolutely warrants the existence of the inferior below them in particular situations.

* This gravel, as well as much of the yellow sand which accompanies it, I have mentioned, in the former part of this paper, when speaking of the gravel about Hulland and Bradley, as diluvium, but, after examining the new red sandstone of Nottinghamshire, I have seen my error.

We return now to the investigation of the position of the beds below the new red sandstone, which we broke off in order to describe that formation, but, instead of confining ourselves to the S. border of the coal-field, we will take the whole of S. Derbyshire. It is evident that, beneath the new red sandstone in the whole of the S. of Derbyshire, some part or other of the carboniferous system lies concealed, because those rocks, as they pass under it on the one hand along its northern border, reappear from under it again to the S. in Leicestershire. It remains for us to discover under what part of this new red sandstone there is a probability of finding the upper part of the carboniferous system, or the true coal measures. If we begin at Wirksworth, we can trace the limestone shale down to Ideridge Hay, from whence we may walk on it, by Biggin and Agnis Meadow, to Ashbourne Green on the one hand, and by Whitley and Milford to Breadsall on the other. Everywhere it passes to the S. under the new red sandstone, from beneath which it peeps out at two detached places, near Langley and at Wild Park, near Brailsford. We may, then, be perfectly certain that, in all the country bounded by lines drawn through Wirksworth, Ashbourne, and Derby, there is not the most remote probability of coal being got.* If we attend to the position of the limestone shale at Langley and Ashbourne Green, we shall see it rising to the S.W. which would induce us to expect to find lower rather than superior rocks in that direction, which expectation is remarkably confirmed by the existence of a knob of mountain limestone, which peers above the new red sandstone at Birchwood Park, about five miles S. of Ashbourne. This is a slight elevation, about 300 yards long and 150 broad, and consists of thick beds of mountain limestone, which dip in every direction from a central point, at an angle of 45°. It is surrounded on all sides by new red sandstone, and is evidently the top of a conical hill, like Crich, except that it springs from a lower level, and accordingly is almost entirely concealed by the red sandstone, which spreads around it. Further S. about Cubley, are some beds of gritstone, which may possibly be millstone grit, but which I suspect to be hard

* Some persons, deceived by the resemblance of the limestone shale to coal measures, and by the occurrence of nodules of coal in a diluvial clay near Biggin, have been induced to sink and bore for coal between Ashbourne and Turnditch—an absurdity, from the expense and disappointment attendant on which the slightest knowledge of the structure of the district would have saved them, and which sufficiently shows the want of a greater spread of a correct geological knowledge.

parts of the new red sandstone. At all events, the existence of the mountain limestone at Birchwood Park makes it highly improbable that any coal is in the immediate neighbourhood, and almost certain that there is none between there and Ashbourne. If we trace the E. side of the limestone shale from Turnditch to Breadsall, we shall find it spreading out towards the S.E. In this direction, also, the millstone grit, which is the base of the coal measures, runs, which circumstance, taken in conjunction with the N.E. dip of the coal measures about Dale Abbey, renders it probable that the limestone shale lies immediately under the new red sandstone for some distance to the S. and E. of Derby; and that, if the coal measures pass under the new red sandstone without any sudden downcast to the S. but merely by an alteration in their dip and gradual lowering of their level, they will still be found to sweep round to the E. and that they will be sought with greater chance of success in Nottinghamshire rather than in Derbyshire, to the S. of the present boundary of the coal-field. It is remarkable that the first part of the carboniferous system we meet with, when it reappears to the S. from beneath the new red sandstone, is the lowest part—the mountain limestone of Ticknal and Calke.* And this circumstance seems to render it highly probable that by far the greater part of the new red sandstone in the S. of Derbyshire conceals only the inferior part of the carboniferous system. That mountain limestone and limestone shale, or millstone grit, but chiefly the two former, compose the substratum, and are in similar positions to what we see them elsewhere, namely, in alternate elevations and depressions; and that over this uneven surface the new red sandstone has been deposited horizontally, leaving one or two of the highest points uncovered by its beds. Under this view the northern part of the Leicestershire coal-field must be looked on as the connecting link between the Derbyshire coal-field on the one hand, and those of N. Staffordshire and Cheshire on the other; this Leicestershire coal-field being only apparently divided from the rest by an old valley or depression, partly due, perhaps, to ancient denudation, which has since been filled up by new red sandstone.

We have now, then, ascertained the certainty of the supposition with which I begged the reader to set out, namely, that the mountain limestone is continuous over the whole of Derbyshire at the

* Except a small patch of what appears to be millstone grit at Stanton, by the bridge.

least. Towards the S. we have traced it into Leicestershire; but in this direction it appears to be thinning out, and no doubt shortly ends. To the W. it runs some distance into Staffordshire, and indeed all across it into Cheshire, as it may be seen reappearing from under the gritstone hills near Congleton. To the N. it passes under the shale and gritstone, from beneath which it reappears in Lancashire and Yorkshire. While to the E. we find it, after passing under the shale and gritstone for some miles, reappearing at Crich and Ashover without any appearance of diminution, and again passing regularly under the coal-field to the E., beneath which it runs to an unknown extent; but, even supposing it to thin out in this direction as fast as it does to the S. it must run for some distance into Nottinghamshire. The whole of Derbyshire, then, is based on mountain limestone, which, after forming the surface of the districts before described, sinks down on every side, and is covered by coating after coating of the superior rocks, the limestone shale, the millstone grit, and the coal measures. All these are always conformable to each other, each dipping (in the same places) in the same direction and at the same angle, and being, in fact, only different parts of one compact and continuous mass of rocks, all the four insensibly melting, as it were, into one another, and forming one whole. Of this whole, however, large quantities of the upper parts have, in different places, been stripped off, and thus the lower portions are exposed to view, and there seems, to a casual observer, to be no connection between the two. This stripping off has chiefly taken place in the central part of the district, where the greatest amount of upheaving force was exerted, and consequently the rocks more shattered and rendered an easier prey to the denuding powers, whatever they were; while, as the beds sink down on every side, higher and higher rocks continually mantle round, and have been preserved, by their comparatively slight elevation, from this denuding action. Whenever any part, however, of this mass of rocks sinks below a certain level, if it be on the outskirts of the district, it is sure to be covered by one part or other of the next superior mass of rocks, the new red sandstone. These are equally conformable amongst themselves, and equally melt one into another, but the different parts are more irregular in their thickness and extent; so that one sometimes thins out and ends altogether, while the rest continue. But if now, disregarding the parts of which these two classes of rocks are composed, we look upon the carboniferous system and the new red sand-

stone system as individual things, we shall see that there is a break or unconformability between the two. The beds of the carboniferous system dip sometimes at a considerable angle, while those of the new red sandstone lie over them nearly or quite in an horizontal position; and the new red sandstone does not lie only above the uppermost bed of the carboniferous system, but also on any of the lower ones that come within its range when the upper are absent.— This teaches us that between the formation of the two there was an interval, during which the beds of the carboniferous system were broken up, and some of them stripped off and washed away, and that, upon the irregular surface thus formed, the new red sandstone was afterwards deposited in a smooth and tranquil manner. If now for a moment we look from effects to their cause, and let the facts we have briefly examined speak for themselves, they tell us that, over all this district which is now the county of Derby (and did we extend our examination we should be obliged to extend our expression to nearly the whole of England), at the remotest period to which we can trace its history, there existed a deep sea. In this sea abundance of animals lived, and moved, and had their being, peopling its tranquil depths with the happiness of existence, the old gradually dying, the young coming into life, life frequently cut short by accident or violence, everything, in short, proceeding as we know the business of existence now to proceed in similar situations. How long this state of things lasted we know not, but sufficiently long for beds of limestone many hundred feet thick to be deposited, and for generation after generation of these creatures to be born, to live their appointed time, and perish one after the other, each race leaving its relics entombed in the successive beds of rock that gradually accumulated at the bottom of the sea. At what rate limestone is formed we cannot tell, but, even under the most favourable circumstances, since we know it to be rather of the nature of a chemical precipitate than a mechanical deposit, and as in far the greatest thickness of the mountain limestone there is no appearance of anything like mud or sand that could have been swept in rapidly from neighbouring lands, the period of time required for such an immense deposit must have been something enormous. At one, and in some parts two periods, we know, indeed, a sudden accession to have taken place by the outpouring on the bed of the sea of a considerable thickness of melted rock or lava, which, when cooled down and covered by other beds of limestone, became what is now called toadstone. But even here we have proof of a lapse of time, because,

immediately above the surface of the toadstone, we frequently find numerous shells, as evidently as elsewhere in the position in which they lived and died; and the limestone that lies upon the toadstone does not differ from other beds, and therefore the lava must have time to grow cool before any of the superior beds were deposited upon it. As we should expect, we find the upper beds of the limestone, or those which were deposited when the sea became shallower, more abounding in animal remains than the lower; for we know that at present comparatively shallow seas more abound with animal life than the extreme depths of the ocean. In these higher beds we first find traces of the diffusion of mechanical detritus in the presence of partings of shale, which begin to separate the beds of limestone; and this increases until there is a pretty equal and regular alternation of beds of limestone and shale. Hereabouts, too, it is not unfrequent to find beds of fragments of shells, as if drifted along by currents. But here again we see proof of the lapse of time, since there must have been alternate periods, in one of which currents swept down fine mud into the sea, and deposited it in thin layers, and in the other a time of tranquillity, in which limestone was precipitated. These alternations, too, are very numerous, since beds about 100 feet in thickness are thus constituted, each layer rarely exceeding 1 ft. 6 inches. Gradually, however, the mud-bearing currents increased in frequency, and the limestone becomes of more rare occurrence, till at length it entirely ceases, and with it almost all trace of animal existence. Still the deposition must have been slow, since the laminae of the shale are of paper thinness. After two or three hundred feet of shale had been deposited, the currents increased also in strength, and became capable of sweeping in fine sand, which formed the beds of gritstone that begin to alternate with the shale in its upper portion. Another hundred feet of alternations of shale and gritstone now succeeds, in which the beds of grit gradually increase as we ascend, until at length we find great thick masses of gritstone, with merely thin beds of shale between them. In these thick masses of gritstone we see every mark of a much more rapid accumulation; coarse grains, and even small pebbles, have been swept along, false bedding, or the heaping of layers of sand in sloping positions, continually occurs, and everything denotes the presence of rapid currents sweeping in quantities of mechanical detritus from no very distant shores. This idea, moreover, is strengthened by finding the impressions or the trunks of broken plants, in a rude

state of preservation ;* and it is among these gritstones that we find first traces of beds of coal. Beds of coal are formed of masses of vegetable matter, which being probably diffused over wide areas of water, to the bottom of which it gradually sank, and undergoing a kind of process similar to fermentation, in which probably heat was generated ; and being also compressed by the weight of other matters, by which it got gradually covered, has at length been converted into coal. For the equal diffusion of sometimes very thin beds of this vegetable matter over extremely wide areas, some length of time must certainly be allowed. An equal thickness of shale would take, perhaps, less time, but even that we see to have been slowly deposited, on account of the thinness of its laminæ. Gritstones we may judge to have been slowly or rapidly accumulated, according to the fineness or coarseness of the material, their deposition, in every case, being probably more rapid than the shale. Of these three things, namely, shale, gritstone, and coal, the whole of the coal measures are made up, in indefinite and almost innumerable alternations, to the thickness of 2000 feet.

The time required for any regular system of operations by which such a succession of events could have been brought about, could not but have been considerable. Such must have been the means by which the carboniferous system of rocks was produced, and, even under the most favourable circumstances that we can conceive, it must have been the work of many, many ages. But we have made no allowance for periods of rest, during which nothing was deposited. There must have been *some interval* between each successive bed, though of how great duration we cannot tell. If we look, too, at the change produced during the formation of the whole, our idea of the time occupied will be still farther enlarged. We find a tranquil and deep sea to have been gradually filled up, or at least so altered as for currents to drift along its bottom, and for the animals contained in it to have become extinct, and at length for creatures belonging to fresh water to exist over its area.† The physical geography of this part of the globe must have undergone some impor-

* The great fossil trees—the occurrence of which in an inclined position, and apparently piercing through many beds of sandstone, seems to puzzle so much a certain class of geologists (by courtesy so called), whose minds are more fitted to the discovery of petty difficulties than the reception of general truths founded on large bodies of evidence—are always found in these irregularly bedded and comparatively quickly formed gritstones.

† This is shown in the “muscle bands” of the coal measures.

that change during this period ; and unless the laws of nature were very different in those days from what they are at present, which we have no right to assume and no reason to believe, we know that this must have been a work not of hundreds, scarcely even of thousands of years. During all this period we have no instance of disturbances taking place in this district ; an ejection of igneous rock over the bed of the sea certainly occurred, but there is no trace of its having been accompanied by any violent dislocating force ; there are no dykes, no veins even, of solid toadstone running into the limestone.* After the last of the coal measures were deposited, however, this district, in common with all the neighbouring ones, in the W. of Europe at least, came to be violently acted upon by upheaving and dislocating forces. Large portions of the previously level bed of the sea were lifted up, many fissures, both large and small, were formed in obedience to the mechanical laws, faults and veins being their result, and many beds, when not broken through, were bent and contorted in various directions, but still, no doubt, under the regulation of similar laws. This violent disruption of the bed of the sea,† whether it took place suddenly, or, as is to my mind more probable, was a comparatively slow and continued operation, would no doubt cause great currents to act upon the broken strata ; and we find accordingly that great denudation, or washing away, of immense quantities of the previously formed beds, has taken place either during this period or subsequently, and many of the present valleys of the country were certainly begun at this ancient time. However long these disturbances may have continued, however, we find that at length they nearly or entirely ceased, and that portion of the district which was still covered by water again began to deposit new materials. On the E. side of the district there was a sea, in which limestone was again deposited, but mixed to a greater or less extent with sand and mechanical detritus, and containing also magnesia. Some parts of it, however, were sufficiently clear for the deposition of pure crystalline limestone and the existence of animal life, since about Bolsover and near Kirkby, in Ashfield, a few beds of carbonate of lime, containing shells, are found ; others, again, were agitated by currents sufficiently strong to bring in pebbles of

* The toadstone clay is frequently found to have come down some distance into the lead veins, but that it would do now were a new fissure formed.

† Or what at least had been the bed of the sea, and was then covered by water, either fresh or salt.

mountain limestone. After the magnesian limestone was deposited, this sea contained nothing but sand and pebbles, or at least nothing that has come down to us ; great beds of sand, full of round pebbles, which must have been swept in by very strong currents, are the only things it deposited. At this period we may suppose the hills of Derbyshire on the one hand, and those of Leicestershire on the other, to have been dry land, or at least a very shallow sea, studded perhaps with islands, while between them ran a deeper straight, in which the sea deposited its sand, and afterwards the marls and gypsum. These beds, forming what we call new red sandstone, never reach above a certain level, but sweep round the outskirts of the high lands, and conceal with their horizontal strata all the hollows and inequalities that, but for them, might exist in the intermediate spaces. They are never, moreover, broken by the faults and dislocations that affect the inferior beds, which shew all these breaks to have happened between the period of the deposition of the coal measures and that of the new red sandstone. As to the history of the district since the new red sandstone period, we are left altogether to conjecture ; we only know that in other places the rest of what are called the secondary rocks, and all those called tertiary, have been deposited. Both of these contain several systems of rocks, each requiring periods of time for their formation proportionate to the vast mass of materials of which they are composed, and to the numerous and great changes which have taken place in organic life during their deposition. At a very recent period (geologically speaking) a deposit has taken place over part of the district, more especially the S. of loose and water-worn materials, the broken fragments of sometimes distant rocks forming what is termed the diluvium. The precise method, however, by which this transport took place, any farther than that it is undoubtedly due to strong currents of water, is uncertain. At a period about the same as this we know parts at least of Derbyshire, in common with much of the rest of England, to have been the habitation of the Mammoth, the Rhinoceros, and numerous other animals that are now entirely extinct, or confined to other regions of the earth. From the close of this last period the history of the district becomes identified with that of the human race. Man comes to take possession of the lands thus wonderfully formed, and thus admirably adapted for his convenience. He is content for a time to enjoy the advantages afforded him by the structure of the earth and the disposition of the materials, so highly conducive to his comforts and enjoyment, without a thought as to

their origin, or the numberless circumstances which have been made to conspire to such beneficial ends. His curiosity, however, at length cannot fail to be aroused; and after long stumbling, and many attempts to jump to conclusions without examining premises, he finds that by the plain, simple, and unfettered exercise of those faculties of observation and reason which have been given him for the purpose, he can arrive as certainly at a knowledge of the wonderful, the unthought-of mechanism, by which the structure of the earth has been produced and is sustained, as by the exercise of the same faculties he had previously arrived at the knowledge of the mechanism by which the structure of the universe is continually upheld.

DESCRIPTION OF THE SECTIONS.

CHESTER

No. 1. is a section taken E. and W. nearly in a straight line, through the places mentioned above it, from Cheshire, across Derbyshire, into Nottinghamshire.



No. 2. is a section at right angles to No. 1, or running N. and S. nearly.— It bends, however, a little to the E. of S. and does not run exactly in a straight line, in order to take in the most interesting points.

N

The faults in these two sections, which are made to break the mountain limestone, must not be understood as all actually existing in the places in which I have put them. Some of them, indeed, are inserted on the authority of Mr. Hopkins, and are correct; others are merely probable. The reason for their insertion was to show the way in which the limestone is fractured, and the toadstone brought up to the surface at different points, without regarding accuracy in the situation of these points and fractures, which could only be preserved in sections on a much larger scale, and constructed with great care and labour.



No. 3. is a section running about N.E. and S.W. from Crich to Ashbourne, being a much shorter distance than the others. The principal flexures in the limestone shale are shown, but there are probably others which are not noticed.

N

No. 4. is a section across the interesting valley of Ashover.

See

All the sections must be understood to be very rough representations of the actual facts. They are drawn to no regular scale, either as to height or length, but preserve pretty nearly the relative distances between the places; while the features of the country, and the relative heights of the hills and depth of the valleys, are given from recollection or guess. They will be found, however, I hope, to give a correct idea of the relative positions of the rocks.



N

In No. 1. the faults in the coal measures, &c. are neglected, there existing not the same reason for their insertion as in the mountain limestone.

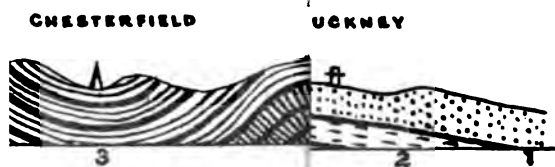


IRE.

Page 32

N N°1.

EAST



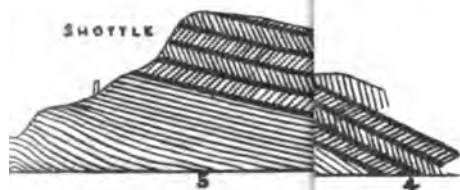
N N°2.

SOUTH



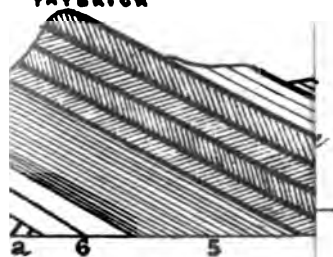
N N°3.

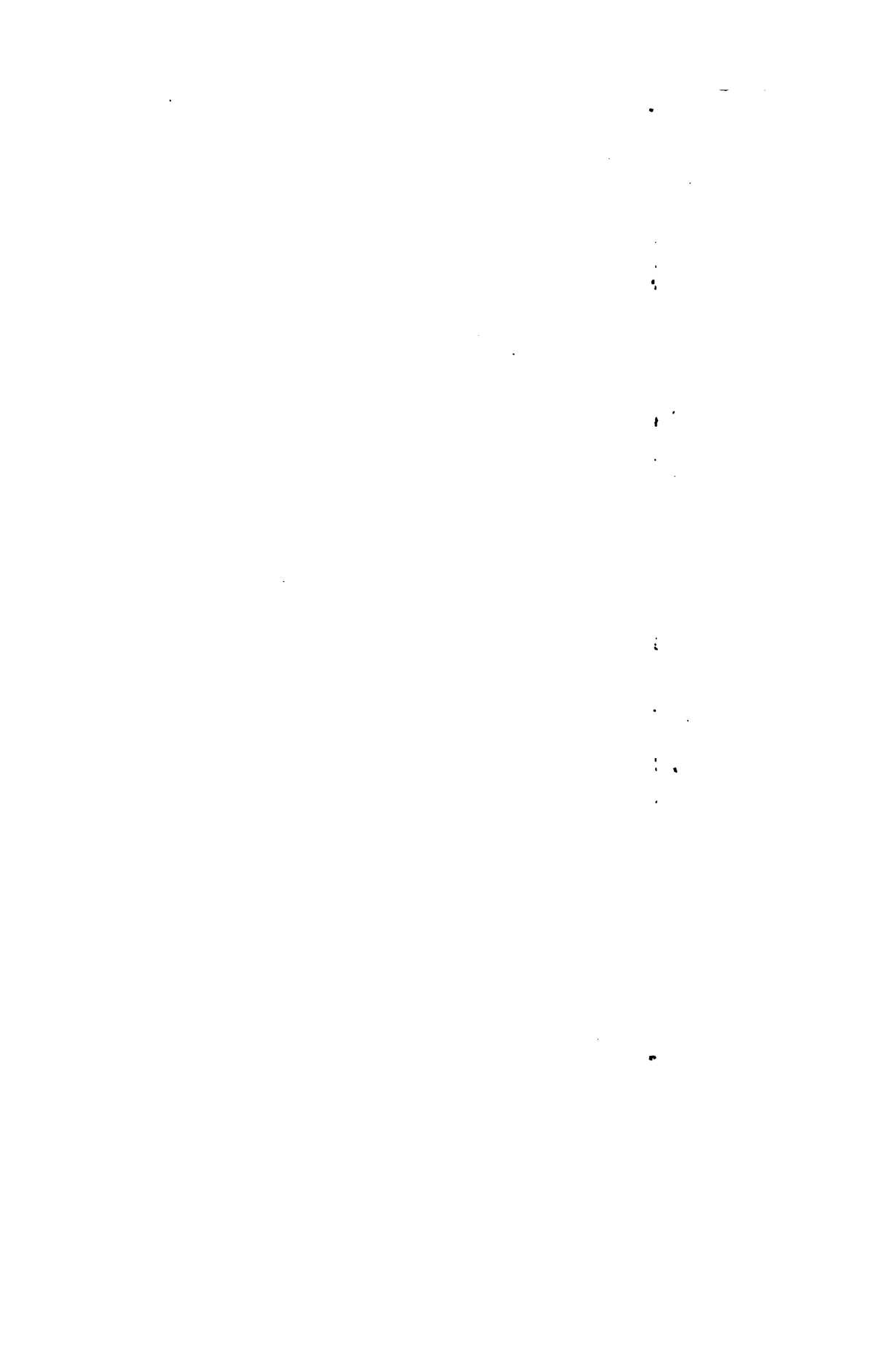
NORTH EAST



N N°4.

FAYBRIGHT





OBSERVATIONS ON THE ANIMALS INHABITING MULTILOCLAR SHELLS,

CHIEFLY WITH A VIEW TO THE GEOLOGICAL IMPORTANCE OF THE SUBJECT.

BY D. T. ANSTED, Esq., B.A. F.G.S. F.C.P.S.

OF JESUS COLLEGE, CAMBRIDGE.

AMONG the numerous forms of animal life with which the ocean abounds, there are few which an ordinary observer would be more likely to neglect, or even avoid with disgust, than the shapeless-looking masses called Cuttle-fish. These Cuttle-fish are to the geological naturalist among the most interesting inhabitants of the sea; for they form a link between the past and the present, resembling in their organization those animals which must once have inhabited the numerous genera of extinct multilocular shells, of which *Nautilus* only remains: a necessary guide to point to those analogies, which, without it, could have been at the best mere gratuitous assumptions.

The class of animals to which all these are referred is called *Cephalopoda*, from two Greek words* signifying their manner of locomotion. This is very peculiar; for around the mouth extend a number of arms or feelers, which serve at once to take prey and convey it to the mouth, and also act as organs of locomotion: so that the feet, if we choose so to call these feelers, do actually proceed from the head, and the applicability of the name is at once seen. Now these cephalopodous molluscs—for they belong to Lamarck's class "*MOLLUSCA*"—are equally remarkable for the apparent simplicity and real complexity of their organization. Under a form resembling that of a simple *Polype* is hidden a rudimentary vertebral column, an approximate cranium, organs of digestion far more nearly resembling those of vertebrated than invertebrated animals, and, above all, a nervous system so highly developed that all the principal parts have acquired the form and situation which they preserve throughout the higher classes, up to man himself.

To trace the changes of form in the habitation of these singular animals, and the probable changes of structure which caused them—to direct attention to the importance of the subject to the geologist—

* κεφαλή, a head, ποὺς, a foot.

and to tempt the miscellaneous reader to a search after truth in this obscure but deeply interesting subject—are the objects aimed at in the following pages. Few, even among geologists, seem inclined to view the subject in all its extent and importance, and little has yet been done to collect and arrange the scattered knowledge there is on the subject. If in this attempt the analogies should appear strained or fanciful, let them be fairly dealt with, and not too summarily dismissed, for it is only by a view of the subject at once extended and minute that we can hope to arrive at just conclusions; and it must not be forgotten that we are engaged in an investigation where there is but little light to guide us, although that little is fortunately well defined, and cannot easily mislead. We proceed to describe shortly the real nature and extent of our knowledge, by explaining some points of the comparative anatomy of the known animals of the class, as they have been elucidated by Mr. Owen and other excellent anatomists.

The arms or feelers, extending from the aperture of the mouth, have been already alluded to as the organs both of locomotion and prehension. Formed for this double office, they are muscular and very strong, and provided with a series of suckers, by means of which any prey that may be taken is forcibly held, and readily conveyed into the mouth.

As the prey thus obtained seems to consist chiefly of small crustacea and the animals inhabiting shells, there is a provision made for the mastication of such unpromising food in a system of powerful muscles connected with the mouth. Besides those at the entrance of this organ, we find strong retractor muscles of the jaws inserted round the opening of the cranium; while the bases of the jaws are surrounded with successive strata of compressor muscles, and the tongue is covered with sharp conical spines, and moved by strong muscles attached to a rudimentary bone at its root.

The jaws themselves are hard and powerful, resembling much in appearance the beaks of a Parrot. They move vertically up and down, and not (as in other animals belonging to lower classes in organization) transversely. They are often found fossil, and are, as may be imagined, admirably adapted to crush and grind those hard shelly defences which few other carnivorous inhabitants of the sea are able to break through.

Connected with this apparatus of the mouth, there are found numerous secretory glands, to assist in the digestion of the food; a large liver, divided into lobes; and more than one stomach, the

second provided with a muscular gizzard somewhat resembling in structure that of the crocodilean reptiles and rapacious birds.

The nervous system of cephalopods shows more clearly than any thing else the near approach of the class to the vertebrata. We find a distinct brain, sometimes divided into lobes, enclosed in an organized cranial cavity; numerous symmetrical ganglia are developed on the great nervous axis, both before and behind that organ, and sympathetic ganglia are observed in the abdominal cavity. "So that, although the brain of the cephalopods is still perforated by the oesophagus, as in all the inferior classes, we find all the principal parts of the nervous system of the vertebrata already developed in this class; and after undergoing a series of changes of form and position in the inferior tribes of animals, regulated by the general development and form of the body, they have here acquired the form and situation which they preserve throughout all the higher classes."*

Having thus given a kind of outline of the most important points in the comparative anatomy of these animals, we now proceed to consider the structure and importance of those shells, whether external or internal, which are, in most cases, the only means left us to determine the nature of the animal once their possessor. In this part of the subject great caution is necessary; for there is danger both of giving undue importance to minor points, and also of neglecting some of those minutiae which sometimes really indicate a change of structure to a considerable extent.

The parts of cephalopodous animals found fossil consist of the shell, the jaws, and occasionally a kind of bag, or *pen* as it is called, which once contained a thick black fluid, to serve as a defence to its possessor, just as in our own seas the Squid, or Cuttle-fish, darkens the water about it, by a similar fluid, when it is desirous of escaping from an enemy. Of these remains it will be necessary to consider carefully the nature of the first—the shell, as it is by far the most commonly preserved, and seems to be, in many respects, the most clearly indicative of the nature of the animal inhabitant. In the absence, also, of a more definite knowledge of the habits and appearance of this inhabitant, the shell remains the only means of classification.

The structure of all the shells of this class of animals is always more or less cellular. In some, as the Cuttle-fish, the internal calcareous skeleton (employed in the composition of tooth-powder and

* *Outlines of Comparative Anatomy*, by Dr. Grant, p. 221.

pounce) is apparently solid, though, even in this case, it is made up of plates of carbonate of lime intersecting one another, and forming an indefinite number of minute cells filled with air; thus making an apparently stony substance really light and friable. In others, again, as the minute internal shells of the microscopic cephalopods, we find the cellular structure more clearly developed, and forming a succession of chambers very numerous, indeed, but not innumerable. In these there is a connection between the chambers by a simple aperture, and their use seems to be shown by their approximation to bony structure giving a solid frame-work, to which the muscles can be attached; and at the same time, by the quantity of air in the chambers reducing the specific gravity of the whole animal, so as to allow of its floating near the surface, or at a proper depth of water.

Lastly, we have a shell constructed like a Nautilus, in which there is a succession of chambers, with a tube running through all of them, and passing into the animal itself, which in this case lives entirely in the outer chamber, and as it increases in size continually enlarges its house, and adds another to the empty rooms which it once inhabited.

Now it must be observed that the highest in order of organization of all these cephalopods, is that group with an internal cellular skeleton like the Cuttle-fish; and this is indicated by the way in which this skeleton is put together. It consists of numerous nearly flat layers placed within each other, the first formed being at the outer part and posterior termination of the shell, and the succeeding new layers extending always more forwards than the edges of the old. These compressed layers are connected together by numerous very minute tubular fibres; so that in this internal laminated shell there is a structure intermediate between that of the external multilocular shells of the less highly organized genera, and that fibrous cellular substance which is called bone in animals of higher organization.

It is not, however, with remains referred to this group that the geologist has most to do. They are useful to him, indeed, in the way of analogy, but either they did not exist in the ancient seas, or the friable skeleton was not of a nature to be easily preserved under ordinary circumstances. It is the shells resembling Nautilus, such as Ammonite and its congeners, whose abundant remains are presently to come under our consideration.

But first it may be worth while to inquire how it is that animals so high in their organization, and once so very numerous as the Cephalopods undoubtedly were, could have vanished so entirely as they seem to have done, without leaving some hiatus in nature. There is,

however, a vitality in nature's arrangements, and a principle of compensation, which quite precludes any danger of this kind. Dr. Buckland suggests that the carnivorous Trachelipods might have supplied their place, and quotes the observations and opinion of Mr. Dillwyn to show the probability of this substitution. Mr. Dillwyn observes that all the herbivorous marine Trachelipods of the older strata were furnished with an operculum, as if to protect them against the carnivorous Cephalopods which then prevailed abundantly; but that in the tertiary formations numerous herbivorous genera appear which are not furnished with opercula, as if no longer requiring the protection of such a shield after the extinction of Ammonites and other powerful enemies of that class. Dr. Buckland remarks upon this that we may see good reason to adopt the conclusion of Mr. Dillwyn, "that in the formations above the chalk the vast and sudden increase of one predaceous tribe has been provided for by the creation of many new genera and species possessed of similar appetencies, and yet formed for obtaining their prey by habits entirely different from those of the Cephalopods."

We may add that during the tertiary period, at least the earlier part of it, one genus of these, the *Cerithium*, existed in most extraordinary abundance and variety, probably clearing away the exuberance of life which must at that time have characterized the country now forming the richest and most thickly peopled districts of France.

However, be the explanation as it may, the fact is undeniable.—The Cephalopods *have* diminished in abundance. Instead of being the most common, they may now be ranked amongst uncommon animals; and the perfect stability of nature in this really most important change is a remarkable instance of the power of adaptation in the economy of the world to every variety of circumstances and every alteration of the conditions of life. No sooner is the pressure, as it were, taken off by the gradual or rapid removal of a class of predaceous animals, than another starts up to take its place. No sooner does a species become scarce than want of food also reduces the number of its enemies; and thus the great laws which govern the world act harmoniously, and in dependence on each other, never deviating far from the strict and definite line drawn by the unseen hand of the Great Guider and Director of these laws.

Proceeding now to the question of more importance—that of classification, we must first direct attention to the difference in structure which separates all the real chambered shells into two great orders, named by M. D'Orbigny the Siphonifera and Foraminifera. There

appear to be many well-marked natural differences between these two groups, although the ground of separation may not seem very clear, as it depends on the nature of the aperture leading from one chamber to another. More, however, is meant by this, than a stranger to the nomenclature might imagine; for it includes, in a great measure, the consideration of how the animal and its habitation were connected and dependent on each other. If, for instance, the apertures between the chambers are in regular succession, and (as they commonly are) produced a little way beyond the septa or walls, forming a succession of short tubes, we at once conclude that a tube has passed through all of these, connecting the body of the animal with the very first chamber formed. This we assume by analogy, from what we know of the anatomy of the *Nautilus*. On the other hand, if there is merely a set of irregular holes in the walls of separation, we see that there could not have been any such communication; and it follows, almost as a matter of course, that the shell was altogether internal, and useful chiefly as a float. There are other differences between the two orders, which will be hereafter considered. It is enough at present that they should appear clearly separate, and that not only by the shell, but, as far as we know, by the structure of the animal.

Let us begin, then, with the Siphonifera; and in order that the nature and uses of the siphuncle may be fully understood, let us trace the history of an individual belonging to a known genus, as *Nautilus*, from the first developement of the shell to the period of its attaining that complicated form which well entitles it to the name of multilocular, or many-chambered.

That part of a shell-bearing animal upon which the shell is formed is a loose, muscular coat, provided with numerous glands for the secretion of calcareous matter, which, on being exuded, hardens, and becomes, in fact, the shell. The rudiments of this defence—which, however complicated it may be in the full-grown individual, is always simple in the early part of its existence—are found in the egg; and there is every reason to suppose that the animal of *Nautilus* is, at the time of its first exposure to the water, covered with a cup-shaped shell corresponding to the form of the animal. The attachment to the shell is partly by two muscles at the sides, and partly, doubtless, by that siphuncle which we have already alluded to, and which proceeds from the region of the heart, passes through some important viscera, and passes out through the mantle, to be attached to the end of this first chamber. This siphuncle is provided with an artery, and seems to retain its vitality during the life of the animal. It may

be imagined that, being connected with the animal, it must necessarily live or die with its owner; but this is not always the case. Muscular fibres extend from parts of the Pinna, and other molluscs, which, when beyond the shell, lose all their vitality, and become mere strings of attachment, without feeling or sensation of any kind. Of course, before any very long time has elapsed, the little inhabitant will have grown too large for his cell, and be ready for other and wider accommodation. In order to obtain this, there seems to be a process analogous to that of casting the shell in crustacea; but, instead of a complete separation, the siphuncle remains fixed, and being, perhaps, itself grown, and also a little extensible, it allows the body to be removed to the wide-open end of the shell. Immediately upon this there is a fresh accumulation and exudation of shelly matter, increasing the shell in magnitude, and depositing, besides, a wall separating the original habitation from the new dwelling of the animal. It is clear, however, that since the mantle is pierced where the siphuncle emerges, there will be in that place a corresponding aperture in the wall; thus forming an air-tight chamber, with a tube passing through it. This process of enlargement being repeated an indefinite number of times, we obtain the complete shell, consisting of a number of empty air-chambers, with the tube passing through all of them. The cup-like form of the animal accounts for the shape of the septa, and the part of the septum where it has the aperture left for the siphuncle is one very useful character for distinguishing genera.

Now if the siphuncle were merely an organ of attachment by which the animal was kept in its place during the formation of new shell, although it might still be an important point to know its situation, there would be little interest attaching to it. But it is not so.—There is every reason to believe it to be a contrivance adapted for a much higher object, and one helping, perhaps, to connect the animal still more nearly with the vertebrated classes. In fishes, and all the swimming reptiles and mammalia, there is always more or less a power of rising and sinking in the water. It is true that this power is much more limited in fishes than people commonly imagine; but in the molluscs generally, and in the less highly organized classes, it is rarely found to exist at all. There can, however, be little doubt that the siphuncle is a means by which the Cephalopods provided with multilocular shells are enabled to alter their specific gravity, and so alter their relative depth.

The whole nature of the contrivance may be thus explained:—The deserted chambers in which the animal once dwelt are filled with

air, and have no communication whatever with either the body of the animal or with the siphuncle, after they are once closed in. The whole shell is thus lighter than the water displaced by it, and probably just so far counterbalances the weight of the animal as to make the whole, when the siphuncle is empty and collapsed, float at the surface of the sea. It must be remembered that the siphuncle passes into the pericardium, which is a large sac filled with fluid, and containing the heart; and as it opens freely into that cavity, and has no muscular fibre to contract it, must be entirely dependent for filling or emptying on the amount of pressure on the pericardial sac.

When the animal is at the surface it floats with the back of the shell above the surface, the arms and body being expanded; and thus the cavity into which the siphuncle passes is filled with its fluid secretions, the tube itself being, as before observed, empty and collapsed.

Now let a sudden danger be supposed to occur. At once the arms and body are drawn within the shell—a pressure is caused on the exterior of the pericardium—the fluid in it is forced into the empty tube; and since there is no communication between the empty chambers, the whole mass is reduced by the alteration of place of this fluid, and the specific gravity of the whole is, of course, diminished. The animal sinks.

Again, when it is crawling, by means of its long arms, along the bottom of the sea in search of food, the arms, it is true, must be expanded, but the body remains closely confined in the shell, which is the lightest part, and floats over the body without any tendency to fall on one side.

The importance of the siphuncle in the animal economy of this class will now be apparent; and it will be no longer a matter of surprise that so small an organ should be made use of to separate the Siphonifera into two families, which have been called respectively the *Nautilacea* and *Ammonoata*, from the respective types *Nautilus* and *Ammonite*. The distinction is that, in the former, the siphuncle is placed either in the centre or nearer the inner or ventral margin, while in the latter it is, without exception, on the dorsal margin. There are other differences resulting, probably, from this; the chief of them being the greater simplicity of the septa in *Nautilacea*, and in most cases a comparatively larger siphuncle than is found in the species referred to the other family. Besides, however, these two groups, there is a third, called by M. D'Orbigny *Peristellata*, which includes the *Belemnite*, a genus departing somewhat widely from any

of those referred to the other two families, and thus requiring a separate consideration.

It is found convenient to sub-divide the *Nautilacea* into four genera, characterized by the shape of the shell, which passes, by successive gradations, from a nearly straight cone to the spiral form and enveloped whorls of the Nautilus. One reason why we prefer this mode of arrangement is, that it will apply, in exactly a similar manner, to the *Ammonoata*; and as we shall show the probability there is that considerable changes in the animal economy were required for these various alterations of shape, there will, we think, appear quite sufficient reason for the adoption of this system of classification.

The four genera which now comprise D'Orbigny's first family, *Nautilacea*, are Nautilus, Endosiphonites, Spirula, and Orthoceratite. It will be remembered that the *Nautilacea* generally have the siphuncle central or ventral, and septa comparatively simple; and, bearing this in mind, let us proceed to consider the genera *seriatim*.

The first is the Nautilus, concerning which we have already said so much that it will hardly be necessary to enlarge much further upon it. The chief point to be attended to in the description of the shell are three: the usually central position of the siphuncle, the envelopement of the whorls by the last, and the simplicity of the walls of separation. There are exceptional species with regard to each of these characters, but on the whole they are very constant, and the slight departures from the type not more than we see in other and more completely known genera. The number of species now known in our seas is only two, while more than fifty fossil ones have been determined.

The recent Nautilus is found in very distant localities, and seems to be capable of inhabiting latitudes varying from thirty to forty degrees north to nearly as much south. It has been seen, according to navigators, in the Red Sea and the Indian Ocean, while that examined by Mr. Owen was taken near the group of islands called the New Hebrides, in the South Pacific Ocean. The habits of the animal requiring that it should obtain its prey near the bottom of the sea, it is not often seen on the surface, and when it does appear is not taken without some trouble, as it sinks immediately on the approach of danger.

Of the fossil species referred to this genus, by far the greater number occur in the oolitic and carboniferous systems; in the former accompanied by a vast number of Ammonites and other Cephalopods, which, being all carnivorous, indicate an extreme abundance of

animal life; and in the latter by very great numbers of Terebratulae and Brachiopodous animals, which must also have required a very large supply of food in those ancient seas.

There is one very interesting fact, with regard to the genus *Nautilus*, which must not be passed over; we mean their universal distribution throughout marine deposits, from almost the first appearance of animal life to our own times. There are, indeed, species of *Nautilus* peculiar to every formation, from the transition limestone to the chalk; others entirely confined to the tertiary deposits; and others, again, as the *N. Pompilius* and *N. umbilicatus*, found living in the waters of the ocean. When it is remembered that this long continuance of a genus is almost without parallel in the history of animal life, and also that it occurs in a class remarkable for high organization, the importance of the subject will be in some measure seen, and we shall be justified in dwelling so long upon this part of it. In fact, if it were not for our knowledge of the recent *Nautilus* and its habits, almost the whole subject of fossil multilocular shells would be entirely beyond our reach. What is now certainty would be mere matter of conjecture; and notwithstanding the vast number, both of species and individuals, we should scarcely be able to make out, with any degree of probability, to what kind of animals they once belonged, whether they were zoophagous or phytiphagous, or, indeed, any one point in their whole history. The *Nautilus* is the guide in all our researches, and it leads us to a knowledge of the natural history of many races now extinct, by those principles of analogy which, when properly and carefully employed, are as certain as they are useful in determining the habits of beings now no longer in existence.

Next in order to the genus *Nautilus*, we have mentioned one which will be new to most of our readers—the *Endosiphonites*, occurring earlier in geological position than *Nautilus*, but apparently extremely limited in the extent of its range. In this genus the siphuncle is on the inner margin of the shell, and the whorls of the spiral, although they all touch each other, are not found to wrap over, or, as it is usually called, envelope, the inner ones. The walls or septa of the chambers are also, on the whole, more generally complicated in their form than perfectly simple or cup-shaped; and in all these points there will be observed a departure from the generic character of the *Nautilus*. This genus was first separated by Count Münster, in consequence of certain species observed in the transition limestone of the Fichtelgebirge (a mountain in the south of Germany, not far from Nuremberg), and was called by him *Clymenia*, which, as it had

been already given by Cuvier to a genus of Annelides, could not be retained ; and on the discovery of new species among some fossils from Cornwall the name Endosiphonite was proposed, as indicating the chief peculiarity in the genus, and also having analogy with the names of other fossil genera of multilocular shells.* The number of species already determined amounts to sixteen or seventeen, thirteen of them German. They are all probably referrible to the same geological period, which is one of the very earliest in which fossil remains are found.

The Spirula is a shell well known to conchologists by a recent species, and apparently very common in many parts of the ocean, but unfortunately the history of the animal whose habitation it is we are not yet able to give ; for, although the shell abounds in many places, the animal is never attached, and there is even some degree of doubt as to whether it includes the shell or is included by it. In all probability the former is the case.

In the transition limestone of Celand, an island on the south-eastern coast of Sweden, there is found a fossil which has been called Lituite, but which seems, as far as can be told, to belong to this genus Spirula. Both are spiral shells, with the whorls of the spine not close to each other, as in Nautilus ; and both have simple septa, and a siphuncle nearer the inner than the outer margin. As these Lituities seem confined to the transition limestone, and the Spirula has never been met with in a fossil state, it will be a very singular anomaly in natural history if these eventually prove to be referrible to the same genus ; for there is no known instance of a genus being re-created after it has been once extinct.

If we conceive the shell of a Spirula straightened out, so as to present the appearance of a series of cup-like chambers placed over one another nearly vertically, we shall have the Orthoceratite, a genus so named from its resemblance to a straight horn. It is entirely confined to a few very ancient formations, although the number of ascertained species is more than fifty, and the abundance of individuals perfectly incredible. The size, too, which some species reached was extremely large ; for they have been found more than three feet in length, and with a diameter of more than six inches at the opening.

* The description of this genus from the English species will be found in the forthcoming volume of the *Cambridge Philosophical Transactions*, where also the analogies with allied genera are more fully discussed. Count Münster's paper is translated in the *Annales des Sciences Naturelles*, 1834.

As many as seventy chambers have been counted in these enormous specimens.

We have thus, in the family of *Nautilacea*, a series of genera of chambered shells, with siphuncles running through them, the form of the shell varying from that of a straight cone to a spiral, in which all the inner whorls are hidden by the last one; and the question now to be considered is the probable amount of change in the animal economy which corresponded to these alterations of shape.

Now we know, in the first place, that the Nautilus is an entirely external shell, capable of some range in the depth at which its inhabitant lives, and therefore sufficiently strong in the structure of air-chambers to resist the increased pressure arising from increased depth in the water. What conclusions shall we, then, arrive at from the structure of the Endosiphonite, where the septa are stronger, inasmuch as they present more points in their intersection with the shell, and where the pressure acts immediately upon the whole surface, and not intermediately, as in the Nautilus, where the whorls successively defend each other? It seems probable that this new genus was an external shell, sometimes rising to the surface, like Nautilus; but from the narrower and less rounded appearance of the shell, and from the shape of the septa, we should conclude that it belonged to an animal of rather greater activity, and one, perhaps, more capable of following its prey along the muddy bottom of a sea, than the inhabitant of such a shell as the Nautilus.

There seems a very great probability that the animal of *Spirula* incloses within its mantle the whole or greater portion of the shell; and from the close analogy of the *Lituite*, doubtless, that also was internal. We should expect an animal thus independent to be endowed with greater powers of locomotion than one encumbered with a house upon its back very much larger than its body; and probably all the free Cephalopods are more swimming than creeping animals. In support of this opinion the *Spirula* is known to be a very thin and brittle shell, and the apertures in the septa, instead of opening a simple communication from chamber to chamber, are united by a calcareous tube passing continuously from the last or outer septum into the first chamber. The size of the last chamber is also, in every known specimen, very small; and although, from the brittleness of the shell, the aperture might and would easily become injured, still, out of the number that have been seen and brought away, something would surely have been found to indicate this extension, if it had ever

existed. What the exact mode of increase in a shell like this may have been, and whether any principal organ of the body was immediately connected with the chambers, the present state of our knowledge with regard to this animal does not allow to be determined. It is to be hoped that some one of our numerous scientific navigators may follow the example of Mr. Bennett,* and, by preserving and putting into the hands of a naturalist the animal of a *Spirula*, set them and many other questions at rest for ever.

It is a matter of extreme difficulty to determine whether the *Orthoceratite* was an external or internal shell. Dr. Buckland has considered the latter as the most probable opinion; but, from the very large size of the last chamber, and the difficulty of conceiving so enormous a cephalopodous animal as to require an internal shell three feet long, we may be allowed to doubt the correctness of such an assumption. The siphuncle, too, varies so much, and was evidently so very important an organ in this genus, that we hardly know how to bring our analogies to bear in the consideration of it. If this singular shell was really the mere skeleton of an animal whose predaceous habits were at all proportioned to its size, we must pause with wonder and astonishment at the state of animal life in those seas which could support myriads of these giant molluscs upon the exuberance of its stores.

There is one more question which presents itself with regard to this part of the subject, although it applies equally to other parts; and that is, whether the temperature required for the development of these large animals in such amazing numbers was greater than is at present known in the climates where they are found. Many, indeed most, of the beds remarkably abundant in these fossils, are in high northern latitudes; and it has been imagined that a low temperature is not favourable to such extreme vitality. It may be so, but we are not justified in concluding at once that it *must* be so. Probably in no part of the tropical seas is there so much living matter as in an equal area in the Polar seas; and it is a well-known fact that the Whale has but to swim for a short space with its mouth open in order to satisfy its appetite, which in so huge a creature must necessarily require a large quantity of food. Still, as many other known facts concerning these early seas seem to point more or less to the

* It is to the fortunate capture of an individual of the *Nautilus Pompilius* by this gentleman that we are indebted for the valuable memoir of Mr. Owen, which has thrown so much light on the subject of the cephalopodous animals of multilocular shells.

same conclusion, there is certainly a high degree of probability that the neighbourhood of the North Pole did not then produce that extremity of cold which now characterizes it. At all events, the general opinion at the present day is in favour of such a supposition; and we do not feel either inclined or prepared to controvert it. All we wish is, to give the reader to understand that it is a supposition, and not a matter absolutely decided.

We have hitherto, while considering the family *Nautilacea*, been guided in some measure by analogies which connect the fossil with the recent genera. Passing on now to the *Ammonoata*, we are obliged to leave behind us these glimmerings of light; and since there are, so far as is known, no living congeners of this family, we are forced to bring into operation certain rules founded on experience, and depending on two broad and general principles: viz. that no part of an animal whatever exists without its use; and that while the general structure is perfectly adapted to the wants of the species of which it is significant, so also every portion has a mutual relation with all the rest, is in itself quite perfect, and exactly fitted to the purpose assigned to it.

The extent to which this entire dependence on the perfect wisdom of the Creator may be safely carried, must be almost marvellous to any person not in the habit of studying Natural History, with enlarged and general views. But no one can call to mind its value in the hands of Cuvier, when applied to the comparative anatomy of animals of higher organization, without acknowledging that it became with him an instrument for the discovery of truth, whose astonishing power was only equalled by the sagacity of him who employed it. It remains still to be seen how far the same means of discovery may be extended to the lower forms of animal life, and the conclusions forced upon us in consequence. We have already shewn that, in applying it to the cephalopodous animals, we are descending only the first step in the scale of organization from the vertebrata (the object of Cuvier's researches), and thus, in the case before us, we are entitled to look with considerable confidence to that dependence of structure on organization which certainly becomes less strongly marked as we approach the limits separating the animal from the vegetable existence.

Proceeding on these principles, we assume the position of the siphuncles in multilocular shells as the distinctive character of two great families, because we find this character accompanied by a very remarkable change in the contrivances which indicate strength, and

thus feel warranted in concluding that a corresponding alteration existed in the structure of the animal inhabitant. We then proceed to subdivide these larger into smaller and more convenient groups, and consider the external appearance as a sufficient generic character, because on that chiefly seems to depend the fact whether the body of the animal was included within the shell or included it. Bearing in mind this distinction, there may be mentioned five well-defined and easily-known genera of *Ammonoata*, which are called *Turrilites*, *Scaphites*, *Ammonites*, *Hamites*, and *Baculites*, all having a dorsal siphuncle, and its walls of separation between the chambers being in all more complicated, and stronger than is generally the case in any genus of *Nautilacea*. As in that family we first explained the mere technical facts relating to each genus, and then enlarged a little on the probable nature of the animal, so we propose now, following the same course, to inform the reader, first, of what is *known* with regard to these extinct genera; and then to indulge in some of those curious speculations which the subject is so well calculated to introduce.

The order in which we have arranged the known groups above-mentioned is not of much consequence, perhaps; but, as it departs from that usually employed, we may as well observe that the names are not thrown together thoughtlessly, but arranged on a principle which, for our purpose, is convenient enough. First, taking the most complicated form, we have named the *Turrilite*, which is a spirally twisted shell, not developed on one plane. In fact, its shape resembles that of a Snail, and many other common turreted shells, too well known to require mention. The next, *Scaphite*, is named from a Greek word signifying a *boat*, and may be compared to an Ammonite whose last whorl is separated from the rest, and after being extended for a short space in a straight line, is again bent round to meet the rest of the shell. The *Ammonite* is a simple spiral, with the whorls contiguous and developed on one plane; the *Hamite* more resembles a hook (whence its name), the whorls not being contiguous, and the *Baculite* (so called from its similarity to a *staff*), is quite straight, and usually in the shape of a long right cone with an elliptic base.

The *Turrilites*, and indeed all the other *Ammonoata*, except the *Ammonites*, are confined to very narrow limits of geological distribution, being rarely found in any formation anterior to the lower greensand, though they do occasionally appear in the oolites. There is one species of *Turrilite* described as occurring in the coral rag of the

north of France; three more in the green-sands of the English cretaceous group, and at least three in the chalk; but they do not seem to be ever very plentiful, and, owing partly, perhaps, to the extremely thin shell, and partly to their shape, which is more exposed to injury than the flat shell of the Ammonite, they are scarcely ever obtained perfect. The shell is strengthened with ribs and tubercles; the chambers seem to be numerous, and the last is very much larger than the rest. The siphuncle is, of course, dorsal, and is usually small compared with the area of the last septum.

The Scaphite is found in the formations from the lias to the chalk, both inclusive. But one species (according to Fitton) is known in England below the chalk, although there is one in the French inferior oolite, and another in the lias at Wurtemberg. There are two more species known, both met with in the English chalk. There seems to be considerable difficulty in determining the real nature and use of the curious last chamber of the Scaphite. The inner part—that is, all the shell first formed by the animal—closely resembles an Ammonite, except that there is a slight *puckering-up*, as it were, of the shell, which indicates the genus; but how the last and outer chamber, which is larger than all the rest together, could, by any contrivance, be transformed into an inner coil as the animal grew and required a larger habitation, is a problem hardly yet attempted to be solved. Besides, in a state which we may suppose adult, the last chamber is sometimes turned round again in an opposite direction, and actually meets, and is partly closed up by, the inner whorls. We shall have more to say concerning this curious genus when we come to consider the probable nature of the animal.

We have now arrived at the third genus named, the well-known and widely-extended Ammonites, a group of shells sufficiently marked by more than one important character, and found throughout the long series of fossiliferous formations, from the very earliest to the chalk; not scantily distributed, as the former genera, but most astonishingly abundant, and including nearly three hundred species, varying in diameter from a line to more than four feet. The general shape of these shells is well known, and they have long attracted the attention even of the least observant, under the name of *petrified serpents* which, by some unaccountable fatality, had all lost their heads. They may be seen in the cottage of the poor and in the drawing-room of the rich; they may be picked up in the quarry or dug in the field; and of all the innumerable proofs that surround us of the former existence of animals now extinct, none is more remarkable than the

universal occurrence of these Ammonites, of which not a single living analogue is found to tell the history of a genus once, perhaps, the most abundantly diffused of any ever created.

The variety of form in these fossils is, of course, very great, and there are whole groups, or sub-genera, characteristic of certain formations, and never found in any other. Thus, the *Goniatites* form the first sub-genus, and occur only in the mountain limestone and older beds. The *Ceratites* are peculiar to the muschelkalk, a peculiar continental stratum, occurring between the upper and lower beds of the new red sandstone of English Geology. The oolite formations are provided with quite a series of sub-genera, confined to them in local distribution; and the cretaceous system, though not characterized by its own group of these fossils, does not want for species found only in that formation. It is necessary that we should first explain the grounds of distinction in these sub-genera, and then, because of their superior importance, we shall enlarge a little on the *Goniatites* and *Ceratites*, two groups departing more than any other from the ordinary type of the genus.

The shell of the Ammonite is, as we have said, of a simple flat, spiral shape, and is formed of a succession of chambers separated by thin plates of carbonate of lime, called septa, which, however, are perforated, and allow a tube to pass through all of them to the first formed chamber. These perforations, too, are always on the back of the shell. Now, it is quite clear that a succession of these transverse plates, in a shell like that of the Ammonite, cannot but strengthen the shell very much, and enable it to resist a pressure and an amount of external injury which would otherwise crush and destroy it. It is also true, though not, perhaps, quite so clear, that if these plates, instead of being flat, are irregularly puckered or bent in and out, by a series of folds all ending in the centre of the plate, and making the line of intersection of the septum of the shell a complicated curve, instead of a straight line, the strength will be very much increased by an increase in the weight of material. This is a truth sufficiently well known to practical men, and acted on in the construction of cast-iron columns, which are always stronger for the same weight when they are fluted. The septa of the chambers of Ammonites are thus fluted, and often in a most complicated way, so as to present a very beautiful and remarkable appearance, somewhat resembling the edge of a parsley leaf, when the line of intersection with the shell is open to our view. In the *Nautilus*, and generally in all the species referred to the family *Nautilacea*, there is none of this

complication of structure ; but in the genera we are now describing it is always met with, more or less varying from a nearly simple line, in some *Goniatites*, to the extreme of complication in the *Ammonites* of more recent formations.

The approximation to the *Nautilus*, denoted by the nature of the septum, is the separation most to be depended on in the group which has received the name *Goniatites*, a name derived from the Greek γωνία, an angle, and pointing out the usual appearance of the intersection, consisting of a succession of small curves meeting in angles which, along the back of the shell, always point in the direction opposite the aperture. Most of the species are in some measure rounded, and often the last whorl envelopes the rest ; indeed, altogether their general appearance more resembles the early forms of *Nautilus* than any *Ammonites* ; but their siphuncle, which usually is extremely small and thread-like, is always situated on the dorsal margin, or, in other words, runs along the back or outside of the whorls. It is supposed, also, that the proportional magnitude of the last chamber was much greater in this group than in other *Ammonites*, so large a portion as one turn and a half being sometimes left vacant for the habitation of the animal.

(To be continued.)

A NATURAL HISTORY OF THE CUCKOO,*

(CUCULUS CANORUS).

BY EDWARD BLYTH, Esq.

THE subject proposed for dissertation is the Natural History of the Cuckoo, concerning which extraordinary British bird it will be admitted that too many elucidations cannot be adduced ; for which reason I purpose to enter somewhat minutely into the several details.

There are many who have lived long in the country without ever having seen the Cuckoo ; and the poets have sometimes figured

* Read before the Ornithological Society of London, July 6th, 1838.

it as a "wandering voice," as an unsubstantial twin-sister of echo, a fairy-note of spring. It is, indeed, pre-eminently (as the rhyme expresses it) a

"timid bird,
Seldom seen, though often heard."

Yet there are few accustomed to ramble in the woods and fields but must have occasionally noticed it while on the wing, either threading its way among the trees with a wild, irregular sort of flight, or passing steadily along at a moderate altitude, its progress sometimes accelerated by a train of one or more smaller birds in close pursuit. Its appearance on the wing may be likened to that of a small Pigeon, but with a longer tail; and those who have seen it once will not fail to recognise it on a second occasion.

Its colour is uniform dark grey above, and on the breast; below whitish, streaked across with the same tint as the back. The quills and tail-feathers also appear barred, when extended. The irides, or coloured portion of the eyes, are bright yellow; the feet pale yellow. The beak, which considerably resembles that of a Thrush, is horn colour; the gape wide, and interior of the mouth bright orange. The legs are short, with long tibial feathers, as in the Hawks; the toes placed two in front and two behind. Old females differ not at all in plumage from the males; but many of the latter, in their second dress, and the females until they are several years of age, are more or less barred with rufous on the sides of the neck and breast. The young are so different as to have been formerly considered a distinct species, having all the upper parts dusky, mottled and barred with rufous, and more or less tipped with dull white. They vary considerably among each other when in this garb, but the males are always considerably more rufous. The nestling Cuckoo has the inside of the mouth deep orange-red, and the irides insipid, pale blue-grey.

Such, in few words, are the ordinary progressive changes of the Cuckoo. From being mottled, it becomes on the upper parts spotless grey, more or less quickly; the females, also, more tardily than the males, and some individuals than others. The change is, moreover, effected entirely by a shedding and renewal of the feathers, and not by an alteration of colour in the same plumage, which happens in some species. The young undergo no moult while they remain in this country, and in confinement retain their first feathers till about February at the earliest; and that they do not shed them sooner, when in a state of nature, is proved by the circumstance

of the moult being rarely completed in the young of the preceding year when they return in spring, one or more of their primary quill-feathers, and of the greater coverts impending them, being then commonly still unchanged.

I mention these particulars because it has been intimated, as highly probable, from the unusual length and quantity of plumage which the Cuckoo carries, that this bird undergoes no change of feather during its first winter, but gradually alters in colour only, as in some Hawks.

I have remarked, also, that the adult birds, previously to their departure, renew their clothing feathers, and also the tail, but retain the quills to bear them on their journey southward. It was in making this observation that I learned additionally that the barred markings on the neck of the female recur for a series of years.

White specimens are sometimes met with, of which one or more may be seen in the national collection; and occasionally a particular state of plumage is assumed, more frequently, it would appear, in the south of Europe than in our latitudes. The dress alluded to, which is very similar to that of the female Kestrel Hawk, bright rufous, barred with black, yet different from the immature plumage described, has been regarded by Temminck and others as a regular progressive stage, common to the whole species; and to account for the comparative infrequency of specimens in this attire northward of the Alps and Pyrenees, it has been suggested that the young of the preceding year do not migrate so far northward as the older birds. The supposition, however, is erroneous; for, even in confinement, I have witnessed the assumption of the grey plumage at the first moult; and it would be contrary to general analogy were it otherwise than erroneous, inasmuch as the young of other migrants return to the place of their nativity the following spring. I once saw a specimen, in this particular garb, which had been shot in Surrey during May, while in the act of crying "cuckoo," and I am convinced that it is merely an occasional variation, peculiar, however, it may be presumed, to the young of the preceding year once moulted.

In its internal anatomy the Cuckoo manifests a close approach to the Moth-hunter (or *Goat-sucker*, as it is sometimes called), and appears to be intermediate in its general structure to that curious group of birds, and the *Tamias* or Puff-birds of South America. The skeleton chiefly differs from that of the Moth-hunter in the modification of the bill and feet, and in displaying a reduced adaptation for powerful and sustained flight; the keel of the breast bone—

to which the enormous pectoral muscles, those which constitute what is termed the breast-cut in a Fowl, and the contraction of which imparts the propulsive stroke in flying, are attached—being less developed, and the wing-bones shorter. The similitude of their alimentary organs is also considerable ; and both are remarkable for the diminutive size of the brain, which in the Cuckoo barely outweighs a single eye (being only about twenty grains), and in the Moth-hunter is reduced to its minimum in the class of birds. There are certain other resemblances observable, but on the present occasion I deem it unnecessary to pursue the subject further.

Both the Cuckoos and the Moth-hunters pertain to that extensive order of birds which, in an arrangement of the class which I had lately the honour of submitting to the Zoological Society, I designated *Streptiores*, (or Screechers) ; an order characterized by numerous physiological agreements, but which embraces many forms externally dissimilar—that is to say, in those adaptive characters which have reference to a special mode of life. It is only in this group, among what have been termed *perching* birds, that the vocal organ is simple, or furnished with only a single pair of muscles ; in consequence of which its various members are unable to inflect the voice, and can only utter some peculiar cry, as we observe in the Cuckoo. Now, throughout the long series of groups which compose this order—that is to say, in all those *Insectores* of Mr. Vigors' arrangement which have a simple vocal apparatus, the brain is less highly organized than in the contiguous ordinal divisions ; and there is a corresponding marked inferiority in the intellectual capacity ; for while the extreme docility of the Parrots, and of the Crows, Finches, &c. is notorious to every one, I am unaware that a single instance can be adduced of any species belonging to the distinct order adverted to, manifesting the least capability of receiving instruction. It is true that they may be tamed, may exhibit attachment to one person more than to another, that some of them, at least, will readily distinguish those they are accustomed to, while they evince distrust of a stranger ; but I am greatly mistaken if any one of them could be *trained* to any purpose, could be taught to perform a single action that is not natural to them. Whoever has observed a Kingfisher, a Cuckoo, or a Woodpecker, in a state of captivity, will readily acknowledge the force of this remark.

With respect to those genera which have been commonly more immediately associated with the Cuckoos, it will be sufficient to remark that the genus *Cuculus* of Linnæus comprehended several, which have since been separated with propriety, though still brought

together as a higher group under the designation *Cuculidæ*. From them, however, it is necessary to detach the Honey-guides (*Indicator*) of Africa, which are much more nearly related to the Woodpeckers, approximating the Cuckoos only in secondary or superficial characters; also the Courols (*Leptosomus*) of Madagascar, which are more intimately allied to the Puff-birds of America; the Rain Fowl (*Scythrops*) of New Holland, which, merely from having a great beak, and for no other reason whatever, has sometimes been placed among the Toucans, is, in every essential detail of its conformation, a true Cuckoo. The degree of affinity which the West Indian Ani, also, bear to this group, must continue problematical, until we know something of their interior anatomy.

As thus restricted, then, a constant character of the *Cuculidæ* (or Cuckoo family) is to have the tail composed of only ten feathers, in which they further resemble the Moth-hunters; unless, indeed, the Ani prove to be admissible, which have but eight. It is only in the series of groups which compose my order *Streptiores* that, throughout the class of birds, the tail is ever composed of less than twelve feathers. In the Cuckoo family, and in the neighbouring one of Puff-birds, the clothing feathers are single, as in the Pigeons, being wholly destitute of the secondary shaft, or accessory plume, which, in the Moth-hunters (as in the Swifts), is considerably developed. All have the toes disposed in pairs—that is to say, two forward and two behind, that which corresponds to the outer toe in the generality of birds being reversed, as in the Parrots; but none of them climb, though some have the foot expressly modified for running along the ground. There is a general tendency, also, to a lateral disposition of the two hindward toes, which is a characteristic structure of the Courols and Puff-birds.

The genuine Cuckoos, or those which are included in the genus *Cuculus* as now limited, are peculiar to the eastern hemisphere, over which they are generally diffused, and more numerous southward of the equator, several species of them inhabiting New Holland.—Among them is a peculiar group, consisting of birds of diminutive size, found chiefly in South Africa, which are remarkable for the gorgeous brilliancy of their emerald-green plumage. The rest are clad in the unassuming sober livery of the species of this country.

The British Cuckoo is very generally distributed over the greater part of Europe, and considerably to the northward of the British islands; but it is doubtful whether it reaches far into Asia, where, however, there are two or three closely allied species, one of which (at least) utters the same cry. It passes the winter in Africa, at

which season none are found north of the Mediterranean. A few breed in the southern hemisphere, towards the Cape of Good Hope. In most parts of Britain it is a bird of rather common occurrence, frequenting woodland districts, and waste lands interspersed with trees. It is plentiful as far north as Sutherland, but a rare and uncertain visitant in Shetland and Orkney.

Its welcome note is first heard, generally, about the second week in April, but if the weather prove chilly and ungenial it continues silent for some time: in the more northern localities its arrival may be somewhat later. The old birds are generally all gone before the end of July, but the young remain till September, at which time they leave the country in small flocks. Some of the adult birds, also, both arrive and depart in flocks, but others migrate singly. The truth is, that many of the young are not even hatched at the time their parents depart; but as fast as they acquire the requisite strength they assemble and migrate, so that there is no particular accumulation of them in the autumn, as would otherwise be the case.

Cuckoos frequently assemble at each other's call during the spring and summer, whence it is not unusual to perceive several on the same tree, or clump of trees; but the companies of them soon disperse as readily as they form. Their well-known cry, from which is derived their name, is common to the two sexes, but is more frequently reiterated by the male; and when they congregate as just related, we often hear this note stammered forth, as it were, with eagerness, its first syllable being broken into two or three. This cry is very hoarsely emitted before it finally ceases, and its first syllable is then, also, sometimes repeated two or three times. It is peculiar to the adult bird, and is first emitted while they are shedding their nestling plumage.

The Cuckoo has also another equally characteristic cry, which is delivered only during flight, and generally as it takes wing: it is a peculiar tremulous whistle, very full and melodious, and, according to my judgment, musical in the extreme. Sometimes the cry "cuckoo," also, is repeated while taking a steady flight: the other sound being chiefly uttered when gliding through a thicket. As remarked by Sir W. Jardine, these birds "are seldom seen on the ground; but, when obliged to be near it, alight on some hillock or twig, where they will continue for a considerable time; swinging round their body in a rather ludicrous manner, with lowered wings, and expanded tail, and uttering a rather low monotonous sound—

'Turning round and round, with *cuttig-ooo*;' "

in short, evincing by these gestures their near relationship of affinity to the Australian Rain Fowl. The voice of the young is an unpleasant shrill twitter, at once recognizable, and which is very apt to betray the place of concealment.

The Cuckoo's food consists principally of insects, chiefly, however, the larger caterpillars, both smooth and hairy. These it first kills by shaking and knocking them violently against the bough on which it is perched, and then renders them thoroughly pliant by passing them several times through the bill, before it swallows them. It also feeds largely in the spring upon the common May Chaffer (*Melolontha vulgaris*), and has been seen to pursue and capture Dragon-flies on the wing. As the season advances it will also attack various kinds of fruit, as Cherries (of which it is particularly fond) and Currants. It appears, also, to devour bird's eggs, as well as callow nestlings, of which more presently; but caterpillars form decidedly its principal and main food, the exuvie of which it casts up in the manner of a Hawk, in oval pellets, of the size of a Sparrow's egg. It is in search of these that the Cuckoo is so often seen about fruit-trees, at the time of its first arrival; and it doubtless renders them an efficient service, as it not only preys upon those which have grown to some size, but also, in the spring, may be frequently observed deliberately picking out the newly-hatched larvæ from their webs; an operation which has been construed by gardeners into "sucking the blossom," if any meaning can attach to such a phrase. Whilst feeding on a tree, the Cuckoo leans very forward upon the bough on which it is sitting, as it examines the foliage for caterpillars, its tail being sometimes raised; and it frequently takes surprising leaps from bough to bough, considering the shortness of its legs. I have never seen it attempt to climb in any sort of way, nor walk up a branch, using its feet alternately; but conceive that the object of its having the outer toe reversed is merely to enable it to grasp its perch more firmly, when leaning so much forward.

Respecting the carnivorous propensity of the Cuckoo, and also the habit already mentioned, of performing its migrations in society (of which latter fact I have abundant additional evidence), it may be interesting to quote a passage from *A Familiar History of Birds*, the production of the present Bishop of Norwich. "Some years ago," relates his lordship, "at dawn of day, early in the spring, a gentleman living on the Cheshire side of the river Mersey, opposite Liverpool, was awakened by a kind of chattering noise, interrupted by the cry of "*cuckoo, cuckoo*," in a low plantation near his house, situated amongst the sand-hills bordering the shores of the estuary,

and on looking out observed a pretty large flock, which, at sun-rise or soon after, all took to flight.

"Here, then," continues his lordship, "we have an instance of their being sociably inclined on their arrival; and it would seem that they are equally so when about to leave us: for in a garden in the county of Down, in Ireland, from the 18th to the 22nd of July, not less than forty Cuckoos were observed, for the most part amongst the gooseberry bushes, probably collecting the grubs which often infest those plants, and not to eat Gooseberries, as the gardener supposed," and also (I must beg leave to interpolate) myself suspect; "and it was remarked that they were almost all so sleepy and drowsy as to permit a very near approach, though not quite so near as to admit of being caught by the hand. There happened to be a late brood of Blackbirds, not quite fledged, in a nest, which were discovered by the Cuckoos, who destroyed all but two; they were seen to tear them in pieces, the gardener actually rescuing one from their grasp, which had its leg and wing severed." I should observe, in reference to this, that the Gullet of the Cuckoo is remarkably slender, notwithstanding the capacity of its gape, being insufficiently wide to admit the finger: it cannot, therefore, swallow a large morsel. His lordship continues—"Not above three or four were heard to cry *cuckoo*, and these in a sort of hoarse, unnatural tone. The greatest number collected towards sunset, though many remained throughout the day. After the 22nd of July only one or two remained, which were evidently weaker than the rest," perhaps backward in their moult.

In *The Magazine of Natural History* a particular tree is mentioned, which, in its neighbourhood, is popularly known as "the Cuckoo tree," from the circumstance of its being annually the resort, perhaps resting-place, of a flock of Cuckoos, on the occasion of their re-appearance in the locality. It is well known that migratory birds not only return seasonally to their former haunts, but also pursue, in general, the exact same route.

The alleged ovivorous appetite of this species next claims our attention. That many eggs of other birds are destroyed by it I have positive evidence; and I once obtained a female the breast of which was smeared with yolk of egg. But this does not amount to proof of the fact that it eats them; and I have sought in vain for traces of this food in the stomach. Popular opinion intimates that the Cuckoo is an egg-devourer; but the circumstance of its destroying them suffices to account for this. There are better grounds for supposing so from analogy. Thus Wilson, the ornithologist of America,

asserts of a species of *Erythrophrys* common on that continent, and commonly termed the Carolina Cuckoo, that "they are accused, and with some justice, of sucking the eggs of other birds; like the Crow, the Blue Jay, and other pillagers:" and this statement is amply confirmed by Mr. Nuttall, whose personal testimony may be considered decisive. Now the birds alluded to, though differing in several points, and particularly in that of incubating and tending their broods, are nevertheless closely related to the Cuckoo; inasmuch that what constitutes the food of one may be predicted, with little hazard, as that of the other also. An ovivorous propensity is furthermore common to several of the yoke-footed tribes. The Toucans have been long notorious for it; and Audubon has remarked it even in a species of Woodpecker, which he describes to enter pigeon-houses for the purpose of feeding on the eggs.

It may be well to notice here an erroneous statement which has crept into many works of natural history, to the effect that the lax and flaccid stomach, both of the Cuckoo and of its American relatives just mentioned, is internally lined "with a growth of fine down or hair, of a light fawn colour. It is difficult," remarks Wilson, "to ascertain the particular purpose which nature intends by this excrescence; perhaps it may serve to shield the tender parts from the irritating effects produced by the hairs of certain caterpillars, some of which are said to be almost equal to the sting of a nettle." But the truth is, that the appearance in question is nothing more than the hair-like spines of the caterpillars on which the bird had been feeding, as becomes at once apparent on viewing it with the assistance of a lens; and as they accumulate these spines are worked into a hard oval ball by the mechanical action of the stomach, which is finally, as already mentioned, ejected by the mouth—a circumstance of ordinary occurrence throughout the series of animal-feeding land birds.

We arrive now at the most extraordinary portion of the Cuckoo's history, its parasitic habit of laying in other bird's nests, and leaving its progeny to the fostering care of strangers. Hence it is observable of them that they never pair, nor are they polygamous, like domestic poultry, but associate promiscuously.

The reason that the Cuckoo thus deviates from the general practice of the feathered race—that is to say, the ultimate or remote cause of it—is obscure; but the proximate or immediate cause may, I suspect, be found in a structural peculiarity, which, I am inclined to think, retards the developement of the eggs, so that a longer time than usual is required to intervene between their successive deposi-

tion. The same modification also suffices to account for the small proportional size of the Cuckoo's egg, which adapts it to the size of the nest into which it is laid.

The Cuckoo deposits its egg in a great variety of nests, both of granivorous and insectivorous birds, though more frequently the latter. This fact is interesting, as some of the species to which it is confided, as the Linnet and Green Grosbeak, rear their own offspring exclusively on macerated vegetable food disgorged from the craw. But the following narrative will tend to throw some light upon the matter. In *The Field Naturalist's Magazine* we read that "a Cuckoo was found, just hatched, in the nest of a Hedge Chanter. It was immediately taken from thence, and placed in a cage containing a hen Canary. The birds agreed perfectly well; but," it is remarked, "what is most singular, when the proper food for the Cuckoo (small caterpillars, &c.) was placed in the cage, the Canary fed its young charge with that, although she herself kept to the hempseed, &c., to which she had been accustomed." Dr. Jenner, however, found in the stomachs of some young Cuckoos that had been nurtured by seed-eating birds the remains of vegetable diet.

The most usual foster-parents of the Cuckoo are the Pipits and Wagtails, and where these are less numerous, the Hedge Chanter; the Larks, the different Buntings, the Robin, the Whin Chat, and Stone Chat, and the several aquatic warblers (*Salicaria*) are also not unfrequently selected. The Greenfinch and Linnet, the Chaffinch, the Common Shrike, and Blackbird, more rarely; and the Turtle Dove, and even the Jay, have been mentioned. Instances have likewise occurred of its intrusion into the domed nest of a Willow Wren, which is torn and shattered by the operation.

The object of the last remark is to show that the Cuckoo actually lays its eggs into the nests which receive them, never carrying one about in its mouth, and so introducing it, as Levaillant affirms to be the case with the small Emerald Cuckoos of South Africa. In the very numerous instances which I have known of the occurrence of the Cuckoo's egg, not one has happened where it could not have been laid into the nest; though I have reason to believe that it sometimes may be dropped in, as Mr. Ord affirms to be the case occasionally with the North American Molothrah (or "Cow Bunting," another parasitic species) as intimated by the fact of its breaking any other egg on which it may chance to fall.* The Cuckoo, however, inva-

* Since writing this, I have accidentally met with the fragment of a leaf

riably, when undisturbed, destroys the eggs of the rightful owner of the nest into which it deposits its own ; for otherwise the alien egg would be very commonly ejected, as I know from repeated experiments made with Lark's eggs, which I have generally used as being most similar to those of the Cuckoo. In these experiments I have commonly found that, if an egg be placed in a newly-finished nest before the owner of it has begun to lay, it is forthwith forsaken ; and I have been informed of the Cuckoo's egg being so deserted, in a state of nature. If the alien egg, however, be placed along with other eggs, then it is oftentimes discarded ; but if the other eggs be removed altogether, and the strange one left alone in their place, the chance is very much greater of its adoption. I do not assert that the procedure of which I have spoken is invariable, because I know to the contrary ; but I affirm that, in the average of cases, the results will be as described.

Now, that the Cuckoo destroys the eggs of her dupe is a fact that, strangely enough, has not been generally introduced into the descriptions of this species ; for which reason I select one or two conclusive instances, to show that I have grounds for the assertion :— A Meadow Pipit's nest was found, with four eggs in it ; and on looking at it the following day these had all disappeared, and a Cuckoo's egg was in their place. Another nest of the same species was found, with two eggs in it ; the next day these were gone, and a Cuckoo's egg was in the nest alone ; and the following day the Pipit had laid an egg to this, and the day after that another, when the nest was taken and brought to me. This narrative relates to the identical specimen now in the Ornithological Society's collection. Indeed, the Cuckoo's egg is very commonly found alone, or when there are others with it, these are ordinarily below their average number, intimating that they had been laid subsequently to the deposition of the alien. My friend Mr. Hoy has communicated the following observation to *The Magazine of Natural History*. " I once observed a Cuckoo," relates that naturalist, " enter a Wagtail's nest, which I had noticed a short time before to contain one egg ; in a few minutes the Cuckoo crept from the hole, and was flying away with something in its beak, which proved to be the egg of the Wag-

of some magazine, in which an instance is recorded of a young Cuckoo being imprisoned in the hole of a tree, having outgrown the size of the aperture through which the egg must necessarily have been introduced ! It may, notwithstanding, have been *dropped in*, supposing the cavity to be shallow, and pretty well filled up with nest materials, a circumstance of which I have no information.

tail, which it dropped at my firing a gun at it. On examining the nest, the Cuckoo had only made an exchange, leaving its own for the one taken."

Instances occur sometimes of two Cuckoo's eggs being found in the same nest; and I have credible information of a case of this kind, in which a couple were found, unaccompanied by any others, in that of a Blackbird. Accordingly, therefore, the Cuckoo must instinctively recognise the egg of its own species, and refrain from touching it. It can be readily shown that she does not destroy those of her dupe previously to introducing her own, inasmuch as, when disturbed in her operations, and compelled to retreat precipitately, her egg is found together with the others; and she is often thus interrupted by the rightful owners of the nest, who may be seen to follow her, and attack her furiously in the air, as she hurriedly tries to escape from them. Indeed, it is not unusual to observe small birds, of various kinds, eagerly giving chase to the Cuckoo; and woe betide her if she happen to approach the breeding-place of a troop of Swallows!

A favourite resting-place of this bird is upon an isolated tree, which commands a wide prospect around; and, in such situations, the female Cuckoo, quietly sitting among the foliage, attentively observes the operations of the numerous smaller birds scattered around her; more particularly noticing those which are carrying about building materials, and marking the place of deposit. Hence it is that its egg is so generally met with in the nests of ground-building birds. "A pair of Wagtails," narrates Mr. Hoy, "fixed their nest, early in April, among the ivy which covers one side of my house, and reared and took off their young. A few days after the young birds had left the nest I observed the old ones apparently collecting materials for building, and was much amused at seeing the young running after the parent birds, with imploring looks and gestures, demanding food; but the old birds, with roots or pieces of grass in their bills, seemed quite heedless of them, and intent on their new habitation. Their motions were narrowly watched by a female Cuckoo, which I saw constantly near the place; but the Wagtails had placed their second nest within a yard of the door, and so well concealed amongst some luxuriant ivy, that the Cuckoo, being often frightened away, was not able to discover it. The intruder being thus thwarted in its design, the birds hatched their second brood, which was accidentally destroyed a few days after. In about ten days they actually commenced a third nest within a few feet of the situation of the second, with safety." Mr. Hoy conti-

nues—"I have repeatedly taken the Cuckoo's egg from the Wagtail's nest; in this locality it has a decided preference to it. I do not recollect finding it in any other, excepting in two instances, once in the Hedge Chanter's, and another time in the Redstart's nest.—In this vicinity, whether the Wagtail selects the hole of a hollow tree, a cleft in the wall, or a projecting ledge under a bridge, it does not often escape the prying eye of the Cuckoo, as, in all these situations, I have frequently found either egg or young."

The same observer remarks that "it appears to be usual for the birds in whose nests the Cuckoo may have deposited an egg before they have themselves begun to lay, to cast out the Cuckoo's egg;" and, as that gentleman has bestowed particular attention on the phenomena of this interesting bird, he has doubtless observed some instances to warrant this remark; though somewhat at variance, by the way, with the general results of those experiments to which I have before alluded. "On one occasion," however, he says, "I had observed a Cuckoo during *several days* anxiously watching a pair of Wagtails building. I saw the Cuckoo fly from the nest two or three times before it was half completed; and at last, the labour of the Wagtails not going on, I imagine, so rapidly as might be wished, the Cuckoo deposited its egg before the lining of the nest was finished. The egg, contrary to my expectation, was not thrown out; and on the following day the Wagtail commenced laying, and, as usual, the intruder was hatched at the same time with the rest, and soon had the whole nest to itself."

Thus we perceive that no constant rules can be laid down, with respect to the subsequent proceedings of those birds to whose care the Cuckoo entrusts her egg; and I have purposely transcribed the purely unbiassed observations of a very accurate naturalist, rather than relate my own to the same effect, because the facts they embody impart additional probability to the supposition that the Cuckoo's egg requires some days to become matured for laying. It is further remarkable that this bird continues to produce eggs when in deep moult; but the number which it lays in a season is not easy to determine, even on anatomical examination, but is probably about seven or eight. The egg is scarcely larger than that of a Sky Lark, of a peculiar shape, equally obtuse at both ends. Its colour is sullied white, densely besprinkled all over with brownish specks, many of which are confluent, intermingled with some that are larger and darker; occasionally it is tinged with green, or sometimes reddish. There is always a peculiar character about it, which renders it at

once recognisable. We have next to consider the raising of the Cuckoo's young.

In many cases it will appear, from what has been already stated, that the young Cuckoo comes into the world alone, unaccompanied by nest-mates ; for as it requires the exclusive care and attention of its foster-parents, which (in general) have enough to do to provide for the almost insatiate cravings of their nurseling, means have been ordained for ridding it of the incumbrance of any fellow claimants. We have seen that the parent Cuckoo effects this object to a certain extent, but often incompletely ; so that its agency, very commonly, amounts only to reducing the brood of legitimate occupants of the nest, and consequently of diminishing the labour that devolves on its own offspring—the astonishing feat of ejecting every nest-companion.

This extraordinary fact was, I believe, first ascertained by the celebrated Dr. Jenner ; “who,” as Wilson remarks, “has since risen to immortal celebrity in a much nobler pursuit, and to whose genius and humanity the whole human race are under everlasting obligations.” The process is thus described by Mr. Selby :—Speaking of the Cuckoo's egg in the nest of the Meadow Pipit, that gentleman asserts that “as the same period of incubation is common to both birds, the eggs are hatched nearly together, which no sooner takes place than the young Cuckoo proceeds instinctively to eject its young companions and any remaining eggs from the nest. To effect this object it contrives to work itself under its burden (the back, at this early age, being provided with a peculiar depression between the shoulders), and, shuffling backwards to the edge of the nest, by a jerk rids itself of the incumbrance ; and the operation is repeated till, the whole being thrown over, it remains sole possessor. This particular tendency prevails for about ten days, after which the hollow space between the shoulders is filled up ; and when prevented from accomplishing its purpose till the expiration of that time, as if conscious of inability, it suffers its companion to remain unmolested.” This narrative appears to be drawn up from those of Dr. Jenner and Col. Montagu, and may be verified by any one who can obtain a Cuckoo at the proper age. The story of the temporary depression between the shoulders, however, has no foundation, except in the attitude which the bird necessarily assumes.

Mr. Ord likewise suggests, and with judgment, as will presently appear, notwithstanding the positive assertion of Dr. Jenner, that “there must have been some mistake in the facts related by that observant naturalist on the subject of the Cuckoo ; for I am unwilling

ling to believe," he adds, "that any bird as helpless as a young Cuckoo is, *before its eyes are open*, has the power, or even the inclination, to eject from the nest the young and eggs which it feels around it. Why should this feeble creature, so feeble that it cannot support itself upon its legs, wish to get rid of companions which in no respect incommode it, but which, on the contrary, add to its convenience? For it cannot be denied that a single bird, when first hatched, is less comfortably situated than when it is accompanied by nest-mates, the softness of whose down has a tendency to maintain that equality of warmth which callow young require. As to the ejection of the eggs by the newly-hatched Cuckoo, it cannot be the fact, the physical powers of the bird being inadequate to the purpose." It will be sufficient, among the numerous notices which, from time to time, have appeared in the natural history periodicals, being simple details of observations made without any ulterior object—that is to say, without design of substantiating or subverting any particular doctrine, to select and condense the following, as positive and satisfactory.

In the passage which I commence with quoting a supposition is involved, which, if well founded—that is, if it be true that the same individual Cuckoo is referred to—the ascertained fact would be fatal to a theory for which I have been contending. The curator of the Botanic Garden at Bury St. Edmunds relates that, on July 17th, a friend informed him that he believed that a Cuckoo had laid eggs in two nests of Wagtails in his garden, as he had seen, early one June morning, a Cuckoo leave the ivy in which a Wagtail had just built; and that on the following morning he had observed it to fly from a large crevice in a wall where he had lately found the second nest. He did not, however, take any notice of this at the time; but, having that morning accidentally discovered one of them to contain a large young bird and five small eggs, he was induced to take a peep at the other, where he found two larger eggs, with three eggs of the Wagtails. There can be little doubt that these were the produce of as many Cuckoos.

On July 20th—that is, three days afterwards, when the Cuckoo was necessarily *at least* so many days old—the two nests were visited: that in the ivy is reported to have contained a fine young Cuckoo, and four young miserable-looking Wagtails, together with a rotten egg; the Cuckoo occupying the centre of the nest, which was somewhat flatter (less cupped) than usual. On July 24th, or *seven* days from the first visit, the Cuckoo was found to be alone; but on searching about one of the Wagtails was found alive by the

side of the nest, and the three others on the ground beneath, quite dead. The living one was replaced, but on the following day this also was found dead on the ground. Here, then, we find that on the seventh, or perhaps eighth day, the last of the nest-mates could not have been long ejected, as it was still alive, and the others had probably only been turned out a few hours previously.

The other nest, in the wall, contained, on July 20th, three healthy young Wagtails and two Cuckoos, which appeared as if very recently hatched. I may remark that six is the ordinary number of eggs produced by the Pied Wagtail. Although there were two Cuckoos in this nest, the young Wagtails were even longer lived than in the other. On July 24th, or four days (at least) from exclusion, they were all apparently well, and growing apace; but the nest was much flattened and extended, and here the two interlopers were in the centre, with the rightful owners ranged around them. It appeared to be very fatiguing to the parent Wagtails to supply the youthful party with food, for which their calls were loud and incessant.

On July 26th, or (at least) six days from exclusion, all the young Wagtails were sitting upon the stones by the side of the nest; and, as the young Cuckoos appeared very hungry, a quantity of small worms, ant's pupas, and bread, were spread upon a board close at hand, with which the old birds stopped their cries.

On July 29th—that is, on the ninth or tenth day—one of the Wagtails was found dead beside the nest, and the others sat shivering on the ground beneath. They were again replaced; but on August 2nd they had disappeared, and were nowhere to be found. The young Cuckoos continued to thrive for some days, when they fell a prey to a Cat, which put an end to the observations.

Now, in this latter instance, the lives of the nestling Wagtails were artificially protracted, and it appears that the site of the nest was unfavourable for their expulsion by the young Cuckoos, which latter, at an early age, however, contrived to occupy the centre of the nest, the flat form of which, it is probable, also furthermore enabled the Wagtails to regain their station, whenever ousted. Still, it is evident that they remained for several days quietly together. In an instance which fell under Dr. Jenner's observation, of two Cuckoos being hatched in the same nest, after a long succession of alternatè endeavours to expel one another, the stronger finally succeeded.

A nest on the ground may sometimes be so situated as to render it

impossible for the young Cuckoo to turn out its fellow nestlings ; an instance of which has been related to me, wherein four callow Wagtails were found dead, apparently starved, beneath the usurper of their abode. A friend recently informed me that he had found, with much surprise, after what he had read on the subject, a young Cuckoo and two Meadow Pipits, evidently several days old, in the nest together ; but on revisiting the place a week afterwards he found the Cuckoo alone. I could adduce two or three analogous instances. The truth appears to be, that the innate propensity of the young Cuckoo to oust its companions is first manifested when about six days old.

At the time of its exclusion, the nestling Cuckoo is covered with soft, whitish down, a circumstance in which it remarkably differs from its naked nest-mates. It exhibits, from an early age, much fierceness, raising its plumage, and buffeting at the hand presented to it, and jerking itself up and down in the nest, with a menacing gesture. Its growth is very rapid, extraordinarily so, considering its great development of feathers ; and its voracity is, accordingly, equally remarkable. It remains about three weeks, or sometimes less, in the nest ; and for a long while after it is flown its assiduous nurses may be seen to follow it with food, at times even alighting upon it with a morsel. "For some weeks," relates an observer, "did the deluded bird," a Robin, "follow her gigantic supposed offspring from tree to tree, and feed it with her favourite food ; and so anxious was the poor Redbreast to satisfy the cravings of her monstrous charge, that she became at length so tame that she would pick crumbs of bread out of the hand, and, after occasionally appropriating a morsel to herself, carry the rest to the Cuckoo, who seemed to devour it with great relish." Another account states that "a Cuckoo that had been hatched by a Water Wagtail appeared every morning, about nine o'clock, for nearly a fortnight, on the closely-shaven lawn in front of the house. Though strong enough to fly without difficulty, it would not assist itself by picking in the least degree, but would wait, with open mouth, till the Wagtail flew with the eagerly-expected morsel, which it greedily devoured. The avidity shown by this little animal, in attending to the wants of this usurper of its nest, was truly astonishing. It ran about rapidly in quest of food, and searched zealously and successfully ; for it was seldom long before it returned with something for its companion, with the feeding of which it seemed never weary. The disparity of size of the two birds rendered this display of maternal tenderness a little ludicrous." In these and some other instances

which have fallen under my observation, the Cuckoo was chiefly tended by the female foster-parent.

The anecdote which I next mention is a remarkable one. "In my neighbourhood," relates Mr. Ensor, "a tenant's son found a Cuckoo in the nest of a Meadow Pipit. He brought it home, and fed it on potatoes and oatmeal dough. In a few days two Wrens, which had a nest with eight eggs in the eaves, and just above the window fronting the cage in which the Cuckoo was placed, made their way through a broken pane, and continued to feed it for some time. The cage was small; and the boy, preferring a Thrush to a Cuckoo, took it away to give greater room to the Thrush. On this, the Wrens repaired to their own nest, and brought out the eggs that had been laid." The truth is, that the sight and imploring cries of a helpless, gaping nestling, excite the parental sensibility of most birds. I have seen a brood of ten Bottletits reared in confinement by a tame (male) Tree Pipit; and young birds may be seen to put food in the mouths of others, as soon as they have begun to pick of themselves. However, on placing a nest of little Goldcrests in the same cage with a Cole Titmouse, in the expectation that the latter would have tended them, the little caitiff took up one of them in his beak, and was about to eat it; but the Tits have most of the propensities of the Jays and Magpies, which are habitual devourers of nestlings. Generally speaking, the cry of a nestling suffices to excite the sympathy of small birds, of whatever species.

When the Cuckoo is able to fly, and has left the nest, the reverse disposition is generally, however, manifested towards it. "A Cuckoo flew from the nest on June 9th; and three days afterwards it was seen on the top of a wall in the immediate vicinity. While sitting here, an amusing and instructive sight presented itself. A Thrush, which probably had a nest close by, in an adjoining garden, evinced the most passionate and marked antipathy to the young Cuckoo, by approaching it with feathers ruffled, beak open, and uttering an earnest cry; some small birds, too, drew near, as if to exhibit their dislike and abet the Thrush."

In a very large proportion of cases, I have already intimated that the young Cuckoo is not even hatched at the time the adult birds leave us; notwithstanding which, some instances have been observed wherein maternal solicitude was evinced by this remarkable species. Thus, Mr. J. E. Gray, of the British Museum, affirms that he has himself seen a Cuckoo, day after day, visit the spot where one of its offspring was being reared, and which it finally

enticed away from its foster-parents. One or two analogous cases, of which I had been informed previously, I was disposed to consider as fabulous.

When taken from the nest and caged, this bird displays the utmost unwillingness to pick up its food, even for months after it would have been necessitated to shift for itself in a state of nature. In this it further resembles the Moth-hunter; and I may remark that that species, also, collects no sort of nest, although it incubates its own progeny. The Cuckoo is with difficulty kept through the first winter, generally sickening about February, if not before; but is more likely to do well after it has moulted. "Several persons of my acquaintance," remarks Montbeillard, "have reared and tamed them. They feed them on minced meat, either dressed or raw, insects, eggs, soaked bread, and fruit. One of these tamed Cuckoos knew its master, came at his call, followed him to the chace, even perched on his gun, and if it found a cherry-tree in its way it would fly to it, and not return till it had eaten plentifully; sometimes it would not return to its master for a whole day, but followed him at a distance, flying from tree to tree." It is very susceptible of cold, requiring particular care in winter; and it evinces the migrative impulse very forcibly. In general, it is a voracious and savage bird in confinement, and not to be recommended to those who are fond of pets: it will be a curiosity rather than a favourite. It is a troublesome species to supply with proper nourishment, and one which the naturalist only can observe with interest.

ON THE DATE AND ORIGIN OF THE PHONETIC ALPHABET.

By G. M. MASON, M.A.

OUR knowledge of remote antiquity is derived from two sources, tradition and letters. The credit due to tradition is encumbered with the difficulty¹ of communicating facts correctly from one man

¹ A magistrate who daily observes the conflicting evidence of eye witnesses to the same and most simple facts, where neither passion or interest is concerned, will appreciate the force of this remark: where testimony is in-

to another, even where the communication is undisturbed by motive or passion; and that credit is indefinitely diminished where a suspicion arises that facts have been distorted by intention or interest. The credit due to narratives that have been orally transmitted through two or more generations, is charged equally with these objections, and with the additional suspicion of being mingled with the refuse that collects upon the tide of time. The distrust attaching to traditional information is reasonable, therefore, when it might have received the collateral aid of letters;² and, anterior to their invention, it will amount, in all extraordinary cases, to disbelief, or merge in vain or insoluble conjecture.

In extending our inquiry, therefore, into the early history of mankind, and of the art which above all others embellishes a state of civilization, we must reject as spurious, not only all admitted tradition, but much of that information which, though transmitted to us through the medium of letters, savours of the puerilities³ of

fluenced by motive, he has commonly to deplore the incredibility of evidence. Legal evidence is, indeed, a comment alike on the insufficiency of human organs to observe and to communicate events correctly, and on the integrity of human testimony.

"Jures licet et Samothracum
Et nostrorum aras, contemnere fulmina pauper
Creditor atque Deos, Dils ignocentibus ipais."—Juv. iii. 145.

A sentiment savouring stronger of the atheist than the good polytheist.

² Written documents are but traditions embodied in a less perishable form, and are preferable only in as much as they are less liable to alteration. The truth, however, of observation and of tradition often suffers in the transfer to written documents. Patriotism, vernacular creed, a spirit of controversy, conformity with a favourite theory, even the melody of an expression, is sufficient to move an author in sacrificing a portion of the truth, except in the demonstrative sciences, in which alone truth is attainable and unalterable. "Though there never were a circle or triangle in nature," says Hume, the truths demonstrated by Euclid would for ever retain their certainty and evidence," whereas "the contrary of every matter of fact is still possible."—*Inquiry concerning the Human Understanding.*

³ The earliest writers, whether in symbolic or phonetic letters, have luxuriated in the puerilities of vision and conjecture. The Cosmogony of San-choniatho introduces us to Πρωτογενής or the first man, אדם ה ראשון Adam, and confirms our acquaintance with the gods, and their mystic genealogies.—(See *Universal History*, vol. 1). The Vedas and the Shistah, or bible of the Brahmins, abound in marvels credible only by babes and sucklings. The authorities of Herodotus, Plutarch, and Pindar, exhibit the ludicrous and inhuman sacrifices connected with the early learning of the Egyptian hierarchy. The celebrated passage of the former author (book ii. cap. 46) challenges all foreign absurdity and indecency, and γυναικὶ τράχυνος ἐμίσχοντο is not transferable into the

the age, in which it is certain that letters had their origin. Our veneration for antiquity should be moderated by our desire for truth, and we should avail ourselves freely of the well-founded doubts with which chronology⁴ anterior to and for some time after the first Olympiad⁵ is everywhere obscured.

Our perplexity, which, on chronological⁶ distrust alone, is suffi-

vernacular languages of Europe. The crest of Sinai, hallowed by the presence of the real Jehovah, was defiled by one foot (the impression is still visible to the credulous eye of the Musselman) of the mighty camel which transported the apostle of God to the seventh or tenth heaven, into the presence of an ideal deity. Aleppo, Damascus, and Cairo in Egypt, have claimed the remaining three feet of that veritable beast, whose incarnation was of five or six hundred miles by geographical inference, and whose bulk, impelled on dusky vanes, must have eclipsed the orb of day. "The medley of pagan idolatry and fabulous superstition," (*Ency. Brit.* art. Confucius) "of the Chinese, the mortal-infant-god Lama of Thibet" (*ibid.* see Lama), "and the unparalleled legends of the christian monks of the dark ages of modern Europe, all (not to accumulate instances) justify our distrust in the written documents of early authors. We cannot, however, pass over the congregations of Ida and Olympus, which, though they might exercise a salutary influence over the uneducated mob of Greece, must have excited the aversion and contempt of her philosophers. The pious of later ages receive with a smile or reject with disdain the theologies of Homer and Hesiod.

* "If we admit the common chronology," says the eloquent and luminous historian of Greece, Dr. Gillies, "there is reason to believe that the scattered fragments of Grecian history were preserved, during thirteen centuries, by oral tradition."—(Vol. i. 8vo, note 3). Again, "All this," say the writers of the *Encyclopædia Britannica*, after having summed up the causes that perplex historic chronology, "has thrown so much obscurity over chronology, that it appears to be beyond all human capacity to disperse it." (art. Chronology.)

* The date of the first Olympiad is a matter of discussion amongst the learned, and Sir Isaac Newton, in common with many other eminent men, has dispensed with the first twenty-eight Olympiads, or a period of 112 years, and dates his first 776 years B.C. But even this date must rest during 250 years on tradition, if we attach credit to Pliny—*Nat. Hist.* v. cap. 29—that alphabetic writing commenced (we suppose in Greece) about six centuries before Augustus.

* "The first prose writers, or more properly the first *writers*, were Pherecides of Syros, Acusilaus of Argos, Hellanicus of Lesbos, Hecataeus, and Dionynus, both of Miletus, the last of whom flourished in the 65th Olympiad, or 520 years before Christ."—Gillies, *ibid.* That the history of the Trojan adventures and heroes, which occupied the attention of mankind till the period of the above-mentioned authors, was traditional, and consequently inauthentic, is to be concluded from the following remarks of Heyne, in his learned *Excursus ad Æneidos librum secundum*:—"Aliquandiu res Trojanæ communī aliqua inter scriptores consensu erant traditæ, prout ab Homero et poetis cyclicis, ex majorum famâ ac narratione hoc est poeticâ fuerant expositæ." Here, then, the fountain of all this history is admitted to be tradi-

ciently distressing, is further aggravated by the mystery in which the authenticity of the early writers is involved. The very existence of Orpheus, of Sanchoniatho, and of Homer, has been debated by the erudite with all the warmth of polemical ingenuity, and the premises on which our arguments should have found rest are insufficient to sustain the gentlest breath of discussion. The Holy Scriptures themselves have been a rallying point round which even believers have exhausted the sources of ingenious and pernicious⁷ criticism ; and the conflict has been maintained to the present day by the perversity of some, and the imprudence of others, whose ardour in the pursuit of truth has well nigh shaken the only unmovable⁸ basis on which, as we are told, truth itself is founded.

tional. Attend to the following :—"Sed cum poetices honos inter græcos frequentari cœpisset, essentque primum, qui sigillatim particulam aliquam ex toto illo cyclo mythico decerptam carmine tractarent ornarent et delectationis causâ variarent, tum alii imprimis lyrici, qui carmina sua *suavibus episoditis distinguarent*, ex eo tempore res Trojanæ quasi materiæ poeticæ loco esse cœperunt, quâ ingeniosi homines in *quancunque formam diffingendâ* uterentur, unumque id propositum haberent ut cum *probabilitate* aliquâ *delectarent*."—He then goes on to deplore the additional confusion that ensued with the dramatic poets, and especially the Grammatici of the Ptolemæan schools, *que omnia miscuit et turbavit* (Apollodorus, in his *Bibliotheca*, still extant, Lysimachus of Alexandria, and others). Those who after these handled this subject, "omnia inter sese miscuerunt totamque adeo veterum mythorum turbarent, ut in plerisque difficile sit perspicere, quid ac quantum veteris vel philosophiæ, vel religionis, vel historiæ, vel prisci sermonis, his subesse credendum sit." After attributing these confusions to the commentators on the poets, he proceeds to reproach the philosophers, the sophists, and the rhetoricians, with a share of the blame. The historians who followed are accused of accommodating these mutilated fragments to the probable arrangements of history. The Greeks, after their subjugation by Rome, and their descendants of the middle ages, are severally charged with having further confounded the Mythic and the Trojan cycles, which at length became mixed up with the conceits of allegory and the visions of astrology. Such, and in such keeping, do we find the argonautic, the Trojan, the Thebaic, and other histories of mankind, prior to and after the introduction of phonetic letters. That dates have been assigned by the moderns to such a mass of fables and confusion, subverting their own high purposes, excites neither surprise or censure—the field remains open, and is unworthy a contest.

⁷ "The prodigious difference there is between the Septuagint (or Greek bible), and the Vulgate (or Latin bible), occasions an embarrassment it is the more difficult to avoid as we cannot positively say on which side the error lies. The Greek bible counts, for example, from the creation of the world to the birth of Abraham, 1500 years more than the Hebrew or Latin bibles."—*Encyc. Brit.* art. Chronology.

⁸ When the succeeding quotation is subjoined in reference to an event in which the whole human race is supposed to be interested, and to which hea-

Having, therefore, disengaged ourselves from the embarrassments of a disputed and suppositious⁹ chronology, and tempered it into a more plastic material on which to exercise rational conjecture, adhering to the first Olympiad (776 B.C.) as the affixum with which to compare dates prior and posterior, and holding all anterior knowledge as partaking of the character of tradition, we shall proceed to the remaining source from which we draw our knowledge of early antiquity, and which constitutes the subject of our inquiry—*Letters*.

Letters, not to enter into over-nice distinctions, are, or rather were, of two kinds, Symbolic¹⁰ and Phonetic.¹¹

It would be idle to demonstrate the difficulty of perpetuating information by a symbolical or figure writing; the inapplicability of

ven itself is a party, it will appear the more reasonable to distrust chronology on matters of minor importance. "Christianity itself had subsisted near 1200 years before they knew precisely how many years had passed since the birth of our Saviour." "Abbé Dennis the Little, who, in the year 532, was the first among the christians to form the æra of that grand epoch, and to count the years from that time, in order to make their chronology altogether christian, erred in his calculation, and led all Europe into his error. They count 132 contrary opinions of different authors concerning the year in which the Messiah appeared on the earth. M. Vallemont names 64 of them, all celebrated writers. Amongst all these authors, however, there is none that reckon more than 7000, nor less than 3700 years; but even this difference is enormous. The most moderate fix the birth of Christ in the 4000th year of the world."—*Ibid*.

* "The historian Timæus, who flourished in the time of Ptolemy Philadelphus, 280 B.C., first arranged his narrative in the order of Olympiads, which began 776 B.C." (i.e. before Augustus closed the temple of Janus, as an emblem of universal peace, our blessed Lord being then five years of age).—"His contemporary Sosibius gave a work entitled *χρονολογια*, Apollodorus wrote his *εὐρατῆς χρονικῆς*: and on such chronology rests the credit of all later compilers, as well as the Arundelian marbles, which were composed 264 years B.C."—Gillies' *Greece*, note 3. What were the materials on which Timæus, Sosibius, and Apollodorus, founded their chronologies, we have laid before the reader in note 6; we should entertain a humble estimate of the inductive powers of him who can receive them otherwise than as the conjectural chronicles of the *Heroic Legends*, or as parties of pleasure into the fields—of time.

¹⁰ The varieties of this kind of writing, hieroglyphic, symbolic, and hierogrammatic, are descriptive of picture writing, or at least of a method of communication amongst the priests alone, and never could have merited the eulogy of Pliny, applied by him to the phonetic letter, "quo usu maximè humanitas, vita, constat et memoria."

¹¹ For the use of those who have not destroyed time in the pursuit of obsolete languages, the word phonetic implies "of or belonging to the voice," *φωνη*, *phone*.

which to the expression of time, place, and abstract notions, reduces it to the dilemma of historical painting, and, like it, subject to the fanciful interpretation of the reader. We shall dismiss, therefore, this kind of letters, by observing that it is more than probable that to this species of letter the very early allusions to book-making¹² have reference. That it was the symbolic writing in which the priests of Egypt embodied their sacred mythologies, we have the best testimony the subject admits; and there may be no impiety in supposing that it was adopted¹³ under the "divine legation of Moses."¹⁴ The singleness of interpretation might be preserved inviolate in the sacred college of the tabernacle, where the subject was one and immutable, while the ever-varying themes of active life would demand a less equivocal medium of communication.

We arrive, then, at that particular variety of letter to which this paper is devoted, which fulfils every intention of the inventor, and which has been embraced by nearly all the nations of the earth; it is based on an accurate knowledge of the connection of the two master senses¹⁵ of the animal machine, and a just estimate of the operations of the brain; it has imitated and extended, by a nice observa-

¹² It would be unreasonable to suppose that even symbolic writing could have existed without materials on which to employ it. Those best suited to a phonetic alphabet had no doubt been invented by the priests of Egypt for the reception of the symbolic writing, long anterior to the discovery of the former kind of letter. Stones, bricks, leaves, and bark of trees, plates of lead, wood, wax, and ivory, might have received the mysterious characters of the hierarchy at a very early period, and suggested a sort of book-making that would facilitate the completion and communication of the more useful discovery. The works of Hesiod, after the discovery of the phonetic alphabet, are said to have been inscribed in tablets of lead in the Temple of the Muses in Boeotia; and the laws of Solon to have been written on tablets of wood (though most probably for the convenience of the public, as that lawgiver died only 558 B.C.) in all probability after the discovery of Papyrus.

¹³ Some divines have stoutly maintained that letters were coeval with, and even anterior to, Noah, but such an opinion proceeds neither of the schools nor of the sanctuary; and that great astronomer, Sir Isaac Newton, when he ventures an assertion that they were known for several generations in the family of Abraham, must have intended the pictorial and not the phonetic letter. The land of Ur, the fire (of the Chaldees), the native place of that patriarch, had in all probability, been early acquainted with an art which symbolized ("the afterwards forbidden thing") the god of fire, or the great luminary of the visible creation, to the fathers of the chosen seed.

¹⁴ "The author of the *Questions and Answers ab Orthodoxos* tells us, and that, therefore, Moses was as well instructed in this hieroglyphic learning of theirs (the Egyptians) as in their mathematics."—Cudworth, cap. iv. xviii.

¹⁵ The eye and the ear.

tion of *their* respective functions, a faculty¹⁶ which is enjoyed by man alone, and elevates him above the animated world ; it has given, by an almost miraculous felicity, sound to the eye and sight to the ear ; it has perpetuated man's transient and feeble voice through time indefinite and space without bound ; has connected in a silent language the nations and generations of man ; and out of his natural has compounded an '7 artificial faculty, that concentrates the wisdom of the species within the grasp of the individual.

We cannot for a moment suppose that such an art was discovered by a savage people, whose mode of life or hypothetical creed secluded them from intercourse with their neighbours : such a people would least of all have suffered from the want of it, and were least likely to move themselves in its invention ; and on this consideration it has, with general consent, been attributed to a '8 maritime people, whose pursuits connect them with adjoining and more distant tribes.

¹⁶ The power of articulation.

¹⁷ A phonetic letter (*ᾠδολικον*, a letter) is a visible sign to denote a specific sound of the human voice. This sign is addressed to the eye, and through it is received on the brain, as the *sound* which it is agreed to denote. A combination of these visible signs is, in like manner, received through the eye on the sensorium as a combination of such agreed *sounds*, or as a *syllable*, the constituent part of a word. Aristotle has said "words are marks of thoughts, letters of words," a sentence which imperfectly conveys the *function* of a letter ; nor does the description of Mr. Astle analyze its operation, when he describes words as "sounds significant, and letters as marks for such sounds." But St. Augustine seems to have approached nearer to a definition in his distinction between visible and audible language : "Signa sunt verba visibilia verba signa audibilia."—"Signs are visible words, words audible signs."

¹⁸ Prior to the time of David, the coasts of the Mediterranean belonged to a people at once warlike and commercial, from Ascalon to Sidon ; and the last four battles fought by David with the Philistines left the victory undetermined. We are left to conjecture, then, that the best result would be an armistice or a suspension of national inveteracies. The dominion of Tyre was unbroken, and the commercial treaties of Solomon and Hiram imply the independence and equality of the latter during the most influential period of the Jewish domination ; and it may be inferred, from the same premises, that the former of those potentates was not in actual possession of the coasts of the Great Sea during that period. After the death of that judicious king, the divisions of Judah and Israel prepared them for subjugation under the successive yokes of the eastern and western empires of the world ; and they are thenceforth, with some plea of human reason, as well as by divine dispensation, received as the "*despectissima pars servientium*" of the human family. It may be suspected [KINGS I. cap. iv.] that the influence of Solomon on the shores of the Mediterranean was derived from matrimonial alliances rather than from success of arms.

Nor is it probable that men whose navigation was confined to contiguous coasts would be prompted to so philosophic a discovery :

“ Qui fragilem truci
Commisit pelago ratem
Primus.”

Those who first ploughed the angry deep on the fragile bark were moved by no such exalted conceptions. The failure of provisions, or the power of a dominant tribe, the desire of new possessions or of plunder, the gratification of animal appetite, the freshness of the rude wave, might indicate emigration, gratify cupidity, or feed the adventurous passion of a maritime tribe ; and the islands and coasts of the Mexican Gulph have afforded to the modern philosopher a lively picture of the ancient Cyclades and the shores of the Mediterranean. But it cannot be supposed to have been in the infancy of navigation that the want occurred, or the attempt was made, to invent a telegraphic language between nations and ages. The first purposes of navigation discountenance the supposition, and the piratical practices of the *Ægean Sea* are commemorated by Thucydides as anterior to the adoption of commercial enterprize. When men, however, having discouraged predatory navigation hitherto pregnant with glory and renown, “ went down to the deep in great ships” in the pursuit of legitimate gain, they would find their councils thwarted, and their efforts defeated, from the want of an art whereby to record the varying transactions of commerce. The symbolic or figure writing, which amply, perhaps perfectly, supplied the exigencies of the temple, would be found inefficient in describing and prizing the multifarious commodities that passed through the stores of merchants engaged in the transport of the produce and manufactures of distant shores ; and the pernicious errors arising out of a verbal correspondence through the medium of agents unprepared with an efficient instrument of recording contracts, would stimulate the invention with a permanently increasing impetus.

On these suppositions, those who have engaged in the inquiry have generally attributed the invention of signs for the sounds of the human voice to a commercial among the maritime people of antiquity.

The sequel of our inquiry will naturally enough divide itself into First, the particular commercial people ; and Secondly, the æra to

which conjecture may attribute the invention of the Phonetic Alphabet.

A reference to the chart of the ancients will assist us in forming an estimate of the several claimants to our attention amongst those commercial states which early distinguished themselves on the borders of the Mediterranean ; and a geographical examination of that great gulph which separates the three quarters of the old world, and of the navigable rivers and seas which either flow into it or approximate its coasts, will facilitate a correct estimate of the relative sources of commercial prosperity of which each of those claimants was possessed. A careful inquirer will enrich his subject with a due consideration of the political and religious, as well as mercantile character of these states, as well as of the countries, however distant, that might pour their stores, through these channels, amongst the inhabitants of its shores.

The palm of having invented the Phonetic Letter is contested by four of these states : Carthage and Greece have asserted their claims against Phœnicia and Egypt.¹⁹ It will be well to follow the probable order of chronology, and to concede to the antiquity of Egypt the privilege of a prior examination.

Egypt is connected at her northern extremity with the southern coast of the Mediterranean, by the river Nile, which, flowing through a valley of 150 leagues in length and of various breadth, afforded throughout an easy navigation to the small craft of antiquity. The annual overflowing of this river is known to all, and its shores were alternately a sea of inundation, a quagmire, a luxuriant valley, and a dusty desert ; and the culture of them seems, from the earliest periods, to have occupied the principal attention of their inhabitants. This valley is divided, on the west, from the interior of Africa, by burning deserts ; and from the western arm of the Red Sea by a desolate region of three days' journey, which, however, has from time immemorial been passed by caravans of Arabs, which, by an overland passage, have kept open the only channel of intercourse between Egypt and the Indian Ocean. On the south the precipitous mountains of Abyssinia precluded all commercial communication.

Unconnected, therefore, on the south and west with civilized na-

¹⁹ The claims of Chaldaea are so slightly founded as scarcely to merit attention ; nor are the inhabitants of Europe at present in possession of oriental information that will disturb the inductions afforded by a careful contemplation of the works of occidental antiquity.

tions, and almost shut out by the desert plains and mountains of Arabia, and the dangerous navigation of the Red Sea, from intercourse with the nations of the east, the commerce of Egypt has at all times been directed principally into the Mediterranean. But the maritime spirit of the people has immemorably bowed under the debasing yoke of an artful priesthood, whose policy²⁰ has discouraged foreign communication ; and the transport of her superabundant produce has been abandoned to the enterprising people who have occupied the more northern²¹ ports of the Mediterranean, or to the Arabian tribes which, traversing the bladeless deserts, have supplied²² the eastern provinces of Palestine and of Arabia, and the shores of the Red Sea, prior to all written record.

To the agricultural energy of her people, to the exuberant fecundity of her valleys, to a grovelling and arbitrary priestcraft, and the despotism of a regal hierophant, may be attributed at once the architectural splendour and the mental degradation of the Egyptians ; and at no period of history have they distinguished themselves by that spirit of foreign enterprize which has led mankind to award *them* the glory of having invented the Phonetic Alphabet. Nor can we conjecture any reason that could prompt their priesthood²³

²⁰ A benevolent mind turns in abhorrence from the contemplation of that general misery resulting from a false and a base policy, which impedes the perfection of human reason, and which only in degree distinguishes the priests of ancient Egypt from those of *coeval* states.

²¹ From Tyre to Marseilles and Cadiz.

²² The reader of Holy Writ may call to mind the journeyings of Abraham, of the brothers of Joseph, and of their father Israel. Partial famines in Palestine have immemorably been relieved by the exuberant stores of Egypt. The same species of commerce is to this day followed over the arid sands of El Tye to the port of Kaira ; and the mountains of Sinai furnish to the inhabitants of Egypt a considerable value in dried fruits and other produce which requires a lower degree of temperature for their perfection than is afforded on the shores of the Nile.

²³ In confirmation of this opinion, that a phonetic alphabet was discovered amongst the laity, it may be suggested that, had it been invented amongst the priesthood, it would have been appropriated to the use of the sacred orders, and carefully withheld from the people. The Brahmins of this day possess and hold secret a phonetic letter, for the diffusion of which the people of India will probably be indebted to the energy of modern Tyre, which holds the coasts and commerce of Hindostan. The learning (does language possess a sound descriptive of the contempt in which such learning ought to be held ?) of the Egyptian priests, was rigidly monopolized by those perverters of truth. That of the Phœnicians was preserved in the ark of the Temple of Jao, from which Sanchoniatho composed the stupid mysteries with which his *Cosmogony* abounds. The hallowed secrecy of the Eleusinian

to the discovery of an art that would lay bare the nakedness of the altar, and expose the depression of its votaries, the hieroglyphic or symbolic, fulfilling the double intention of a sacred letter, secrecy and discretionary interpretation ; and we are justified in our conclusion by historic testimony, which commemorates Manetho, their earliest historian, in the year 260 before the æra assigned to Christ.

The claims of Carthage may be referred to the parent state of which she was a colony, and our research from the shores of Africa will be directed upon the title of Greece.

The bays, creeks, and promontories, by which the shores of Greece are everywhere indented and protected, and the innumerable islands which are spangled over the Ægean waters—

“ Bacchatamque jugis Naxon, viridemque Donyssam
Olearon, Niveamque Paron, sparsasque per æquor
Cycladas.”—*Æneid*, lib. iii. 125.—

rising on the vision, and offering temptation to the navigation of the ancients, at first sight excite the sentiment that here was the cradle on which the infant craft of the mariner was rocked into maturity. The coasts were divided amongst innumerable independent tribes of shepherds or pirates, equally ready to dispossess each other of a settlement, or to retire from a district to which they were attached only by the produce of the soil. The facility of inland and transmarine emigration inspired a character of adventurous enterprise ; and the coasts of Greece, of Asia Minor, and of the Ægean Islands, are stated to have been peopled with piratical hordes, which struck terror into the inhabitants, and levied contributions at discretion ; and tradition has decorated the brow of Minos²⁴ with the laurel of having suppressed a custom subversive of social security.

Some time after this event,²⁵ Agamemnon, king of Argos, con-

mysteries and of the Etruscan augurs, the dismal seclusion whence issued the fatidical ravings of the sibyl :—

(Ex adyto—Cumæa Sibylla,
Horrendas canit ambages, antroque remugit ;
Obaculis vera involvens.)

bear testimony to the exclusive policy of the ancient priesthoods ; and the Scriptures of the Old and New Testaments, under the old and new dispensations, were carefully concealed from vulgar curiosity till after the Reformation of Luther.

²⁴ Καταστάντος δὲ τοῦ Μινῶ ναυτικῆς πλεωμυτικῆς ἐγένετο παρ’ ἑλλήνων, &c.—*Thucydides*, 1, 8.

²⁵ The grave sarcasm of Cervantes has afforded us a type of the chivalry

voked an armament of subjects and allies, and undertook the memorable expedition to Troy,²⁶ which, if it be only a flight of imagination, has inspired the youth and warmed the age of succeeding generations. Prior to this celebrated armada, the expedition of Jason²⁷ and his colleagues in quest of the golden fleece has been handed down to us in song and tradition, and was probably founded on a mercantile enterprize of some importance from Greece to the Euxine Sea, which would rival, in the estimation of contemporaries, the once-thought-eutopian voyage of Columbus.²⁸

Nor was the maritime spirit of the primitive Greeks depressed by civil or religious regulations of a character to circumscribe its first adventurous essays. Unlike the embodied hierarchy of Egypt,²⁹ which held down a single people under a single crosier, *their* religion was exercised with independent and paternal piety in the petty tribes that occupied the mountain and the valley, uncontrolled by the *rod of magic* or the sceptre of despotism. The most daring and most fortunate hero directed the destinies of his tribe, and discharged the patriarchal functions of priest and parent with the common approbation of his people; and this primitive polity and piety must have served them long ere the establishment of a common oracle had condensed the faiths of all into an identical mythology. Several circumstances, however, retarded the commercial prosperity of

of ancient Greece and of modern Europe in the valorous knight of La Mancha, whose Dulcinea del Toboso is not less a divinity than the Spartan Helen, at whose altar the Grecian heroes sacrificed a long ten years of hardship and adventure. Thucydides (Book 1, 9) rejects the fable and reserves the *probability*.

" The decision of Mr. Bryant, that such a war never existed, and the inferences arising out of the learned *Excursus* of Heyne, alluded to in note 6, class the whole history amongst the legends of poetic fiction.

" Every lover of classic lore (there are perhaps too many of them) will lament the fate of the gay and glorying Argo, which, fabricated by the immortal Gods, and freighted with the chivalry of Greece, waving her banners on the black waters of the Euxine, and ushering civilized to savage man, is foundered by the breath of remote and inevitable truth, and doomed to the fanciful regions of epic conception.

" *History of America*. The lover of romance may rest from the pursuit of fiction while he indulges in the *history* of marvels subdued to the tone of truth, and embellished by the hand of Robertson.

" At an early period, however, the pretensions of the oracle at Delphi were sustained by the superstition or policy of the Amphyctionic council, and the temporal edicts of the Grecian magistrates confirmed the eternal decree of the God of Day.

Greece, notwithstanding these advantages, which seem sufficient to have secured her maritime ascendancy.

The Gods³⁰ of Phrygia avenged the disasters of Troy, and the triumphant heroes of Greece were scattered in unknown regions, or fell by the hand of domestic treason; the attention of the powerful was withdrawn from commercial speculations to the recovery or establishment of kingdoms and dominions, and the regal enormities that fired the imagination of the dramatist diverted the people from a useful art, natural to an insular and maritime region. Seven centuries elapsed from the Trojan to the Peloponnesian war, during which the commerce of the Mediterranean was engrossed by an adventurous tribe insignificant as a nation amongst men, and afflicted by the especial wrath of the deity.³¹

Nor were the intestine calamities of the Greeks counteracted by their local advantages. The conformation of their coasts was, it is true, eminently calculated to encourage early navigation. The harbours, creeks, and small rivers, with which they were minutely intersected, furnished ample employment for the light craft of a coasting trade; but they were cut off from all communication with the nations of the east by the entire breadth of the Mediterranean Sea, which, in the infancy of navigation, must have been an almost insurmountable obstacle to mariners who seldom ventured beyond the sight of land,³² and who, even if they had overcome that difficulty, would have learned the Indian route by sea or land later than the inhabitants of Egypt or of Syria; and when in possession of its knowledge, had no terri-

³⁰ In an argument conversant with the materials of antiquity, it is difficult, perhaps painful, to abjure the aid of a machinery by whose means truth, if it be not illustrated, is, at least, rendered more attractive.

³¹ It must not, however, be forgotten, that the obstinate disobedience of the chosen seed had fanned the wrath of Jehovah into a denunciation which was fulfilled to the letter. The Philistine and the Canaanite were left as a thorn in the side of Israel; and it would not be easy to establish the assertion of some commentators, that the sea coasts of Palestine had ever been subjugated by the HEBREWS.

³² The modern improvements in navigation are attributable to the discovery of the magnet, (as is generally supposed) by Flavio Gioia, a Neapolitan of the thirteenth century. The discovery might interest a few friends, or assist in the aggrandizement of a family, but the whole human race owes a debt of gratitude to a man through whose agency national and religious prejudices are lapsing into harmony and toleration. The discovery of a few imponderable and invisible agents of nature is heaving up the whole system of ancient socialism, and a vast moral excellence is following upon the physical discoveries of the eighteenth and nineteenth centuries.

tory through which they could establish a commercial intercourse with those distant countries.

Nor was the enterprise of the Greeks stimulated by the proximity of a northern market for the luxuries of India. The inhabitants of the boundless and desolate regions of the north easily supplied by domestic art and industry the simple exigencies of a pastoral life, and were uncivilized, in those early times, below the consideration of mercantile adventure. The mountains of Thrace and Macedonia³³ precluded an intimate communication with those districts; and the distant voyage of the Hellespont, the Euxine, and the Danube, was interdicted by ferocious hordes of barbarians, more ready to plunder³⁴ than to purchase the costly manufactures of civilized nations.

Greece, therefore, did not occupy that central position between the producer and the consumer essential to the possession of a commercial monopoly. In after ages, the grandeur of Venice and Genoa, of Livorno and Pisa, arose out of the incipient luxury of the same regions, which, in Grecian days, were conversant only with the arts of savages or of shepherds.

Not so the Phœnicians : driven from their piratical ascendancy³⁵

³³ In countries uncivilized by the arts and manufactures, it has been found impracticable to establish commercial intercourse with mountainous districts, the inhabitants of which retain pertinaciously and bring into civilized communications the predatory habits and morals of their recesses. The mountains of Wales and Scotland offer few temptations at this late period to mercantile enterprise; and the commerce of Geneva is confined principally to the northern banks of the Lake of Lemman, the gentle slopes of which are advantageously contrasted with the precipitous and threatening heights of the Alps, which are based on its southern border. The Welsh, the Scots, and Savoyard mountaineers are in bad note on the ledgers of the British and Swiss manufacturers and merchants.

³⁴ The Black Sea acquired its ancient appellation as well from its tumultuous waters as from the no less fierce wanderers that inhabited its shores; and the title *Ἀξίνος*, axenos, or inhospitable, is perpetuated in the days of civilization under the corrupt epithet of Euxine.

³⁵ They arose out of the taste for arts ingrafted into Europe by the remnant of fanatics who had returned from the rescue of the holy sepulchre, and which was the only salutary result of the ill-conceived, the ill-conducted, and the ill-fated crusades: this taste was gratified by the encouragement of the Indian trade, over land and by Egypt. The merchants of the towns named in the text established the arts of commerce throughout the north, and allying themselves to the potentates of Europe, wore out a prejudice which had excluded the pursuit of merchandize from all consideration under the military despotism of Rome.

³⁶ Καὶ οὐχ ἴσους ἄνθρωποι ἴσους αἱ νοσήματα, καὶ εἰς τι θνήσκουσιν καὶ θοίνουσιν, οὐδὲν γὰρ ἡ τὰς ἐλλείποντας τῶν νόσων εὐνοίαν.—*Thucydides*, A. η. "The islanders also were

over the islands of the *Ægean*, we meet them on the sacred shores of Palestine ; and the readers of Holy Writ will recognise in the sons of Anak³⁷ and the denounced Philistine,³⁸ in the Canaanite and the Sidonian, the aboriginal mariners of the Mediterranean Ocean. The Word of Jehovah and the legends of the heathen attest the maritime pre-eminence of the merchants of Sidon and Tyre, of Askalon and of Joppa ; and it is interesting alike to the geographer and the historian, the devout and the philosophic,³⁹ to trace the causes of that opulence which raised the Grecian buccaneer to the Phœnician merchant, and placed the devoted Tyrian amongst "the honourable of the earth."

The district that lies between the precipitous front of Lebanon and the Mediterranean Gulph does not exceed the width of a few miles, and yields its produce with reluctance³⁹ to the labour and ingenuity of the husbandman, or offers a scanty pasturage to the inglorious shepherd ; and the first settlers on its coast would with difficulty establish a colony without the aid of navigation. The inaccessible heights of Lebanon presented a boundary the subjugation of which would appear useless,⁴⁰ and beyond which conquest would

not less addicted to piracy and plunder, being Carians and Phœnicians, and these inhabited the greater number of the islands."

³⁷ The learned biblist Bochart tells us, that the most probable etymology of Phœnicia, or Phœnice, is Phœne *ΑΝΑΚ*, i.e. descendants of Anak.

³⁸ That the Phœnicians inhabited Askalon, a principal city of the Philistines, we have the testimony of Herodotus ; and that the inhabitants of Askalon were of sea-faring habits is also to be inferred from the same authority : and he attributes the establishment of the worship of Venus, both in Cyprus and in Cythera, off the coast of Peloponnesus, to that maritime people, the *φαινίκιοι*, applies especially to Askalon, as does the *φαινίκιοι* of the succeeding sentence—in *φαινίκιοι τῆς Συρίας ἱερῆς*.—*Herodotus*, Book I. 105.

³⁹ The plains of Esdralon, of Galilee, and of Jordan, as well as those on the coast, rapidly decline into a state of sterility if neglected by the hand of art ; and lying low, are, in the hot season, denuded of pasturage, which, however, is renewed as suddenly by the fall of rain, or perhaps a reduction of temperature.—*Burkhardt and Buckingham, passim*.

⁴⁰ The mountains of Lebanon are of various aspect : the Peak of Sanin is majestic ; his feet washed in the ocean, and uprearing his hoary and time-stricken head into the presence of his maker, he seems to have inspired, since time was, the rapt enthusiasm of the poets, and the impetuous rhetoric of the prophets. Winter on his brow ; his shoulders clad in the mantle of autumn ; spring around his loins, and summer at his feet ; he stands 5000 yds. above the waters : and yields in the same region, and in the same month, the vegetation of the four quarters of the globe and the four seasons of the year. The plains pressed by the industry of man yield, in places, corn, barley, cotton, maize, sesamum, silk, oranges, bananas, lemons, peaches, apricots, and figs.

be hopeless : but the spirited efforts of the mariner would early discover the value of a station centrally situated between the coasts of Asia Minor and Greece on the north, and of Egypt and Libya on the south. A short acquaintance with this sterile shore would satisfy the enterprising trafficker that the produce of the mountains and plains of Syria and Palestine, and perhaps the manufactures of Mesopotamia, of Persia and of India, might afford them a lucrative source of exchange with the people of the west ; and the sacred or accursed love of gold would, in due time, discover the proximity of the two arms of the Red Sea,⁴¹ through which he might establish a maritime connection with the hives of Persia and Hindostan. A more intimate acquaintance with this devoted coast would extend his vision over the stores of Caucasus and the Caspian, which, conveyed south down the Tigris and Euphrates, have found their way, in all probability, from remote antiquity, across the great desert to Damascus and Tyre.⁴²

The markets of the Mediterranean were easily accessible to the descendants of a race of pirates, who, from Phœnicia, commanded the opposite shores of the Great Sea, inhabited, even at that early period, by people⁴³ initiated in the arts which subserve the elegance and ease of

The base of the mountain presents, at seasons, pasturage, olives, tobacco, vineyards, and douna. The more elevated ranges have been rendered prolific by the art of husbandmen, and apples, pears, plums, with corn of various kinds, and the fruits above enumerated, are reared in appropriate patches of land. Brambles, firs, oaks, and a solitary group of time-worn cedars, occupy the heights, while the crest of the ridge lies wrapt in a robe of unsullied snow. The present desolation of the plains, and the culture of these fearful recesses, seem alike to reproach the tyranny of the Turkish lord, who drives the husbandmen into the fastnesses of the mountains, to avoid his restless and insatiable extortion. The mountains did not, in all probability, in old times, offer the temptation they would now present to adventurers.

⁴¹ Herodotus, in his first chapter, derives the Phœnicians originally from the coasts of the Erythrean Sea. "Τούτους γὰρ ἀπὸ τῆς Ἐρυθρῆς θαλάσσης ἀναίκαμινους," &c.

⁴² Read the elegant translation of the xxviii chapter of Ezekiel, in Volney's *Egypt and Syria*, chap. xxix.

⁴³ Speaking of the ancient Etruscans, who, prior to the establishment of the Roman power, are said to have occupied the whole of Italy, Denina says—
"Il tempo della maggior grandezza loro è difficile a determinare ma se punto meritano riguardo le opinioni dei cronologi in tempi così rimoti, abbiamo da credere ch' essi passassero in Italia circa dugent anni dopo la guerra di Troja, e più di dugento avanti la fondazione di Roma." Mr. D'Hancarville, in a learned dissertation on architecture, prefixed to the *Antiquités Etrusques*, Paris, 1786, considers that the Tuscan order was the *first* invented, and taken by the Thyrranean Pelasgi, and imported thence into Athens. "Nous soupçonnons donc que l'ordre Toscan, inventé la première de tous, remonte à

man. The indigenous products of all the shores of the Mediterranean very much resemble each other, and, except in occasional or partial failure of crops, would allow of little interchange; but the earliest merchants would readily discover the avidity with which rarity and novelty are sought by those who have made the first advances in civilization. The fine cloths of India, the glass and scarlet robes of Tyre, the gold of Ophir, and the iron of the Chalybes; the dried fruits of Palestine, of Syria, and of Sinai, the spices of Arabia and Hindostan, and the antipodal stores of Ultima Thule herself, would excite the cupidity of the purchaser, and remunerate the enterprise of the merchant; and it is interesting to contemplate in the commerce of Sidon and Tyre the prototype of British vigour and speculation.

The citizens of those woe-doomed havens⁴⁴ ministered to the

des siècles antérieurs à la guerre de Troie, et que sa découverte a été faite dans le temps de la grande puissance des Etrusques."

⁴⁴ The prophet Ezekiel was taken captive to Babylon about five hundred and ninety-nine years before the christian era; and it may be supposed that about the same time, or soon after, Nebuchadnezzar commenced his siege of the continental city of Tyre, which siege lasted 13 years. The Tyrian citizens, to avoid the inconveniences of a future siege, retired to the island, and established their city on the waters. The offended pride of Alexander the Great, 270 years after this period, was appeased only by the destruction of this independent and single-handed opponent, which had checked, during seven months, his lust of universal dominion. The city, however, was soon rebuilt; and about 450 years after its destruction by the son of Philip, it was made the metropolis of a district by Hadrian, the fifteenth emperor of Rome. In the conflict of national fanaticisms, she fell in common with the cities of Spain, Africa, and Arabia, of Persia, Palestine, and Syria, under the zeal and scimitar of the disciples of Mahomet, 638 years after the propagation of christianity on her borders. She was again wrested from the grasp of infidels by the devoted fanaticism of the crusaders, under Baldwin II. the phantom king of Jerusalem; and after the holy sepulchre had been again abandoned to the keeping of infidels and Musselmén, was again destroyed and deserted, by the injured and avenged Sultan of Egypt, in 1289. In 1783-4, the philosophic and faithful Volney remarks, "The whole village of Tyre contains only fifty or sixty poor families. The situation, nevertheless, of the once empress of the ocean is favourable to mercantile enterprise, though the commerce of the east has been abstracted from her paths into the far Atlantic." Mr. Buckingham, one of the most recent travellers in Syria, describes it as again rising into comparative importance. "At the present time, the town of Sour (Tyre) contains about eight hundred substantial stone-built dwellings, mostly having courts and various conveniences attached to them, besides other smaller habitations for the poor. There are within the walls one mosque, three christian churches, a bath, and three bazaars; at the lowest computation, it contains from five to eight thousand

splendour of Solomon, the wisest of the chosen kings of Israel, and, establishing factories on the northern gulphs of the Red Sea, they made themselves masters of the dangerous navigation of its sacred shores. The coasts of Arabia, of Persia, of India, and Abyssinia, were tributary to their commercial demands; and transporting the manufactures and productions of those ancient nations across the isthmus of Suez to Rhinowlura, they poured them forth into the lap of admiring Europe. Impelled by restless energy or the abiding desire of wealth, they are said to have issued from the Gulph of Arabia, to have circumnavigated the huge peninsula of Africa, and to have returned under the columns of Hercules into the Mediterranean waters, the adventurous precursors of a remote posterity, who, in the lapse of ages and in the wake of *their* fragile barks, have ravished the riches of the east from the merchants of the Adriatic and Tuscan seas, and accomplished the fulfilment of inscrutable wrath against the earliest benefactors of the human family. They boldly committed themselves to the wild waves, and no less inhospitable savages, of the Euxine; and, daring the empire of Neptune, they stemmed the current of Gades, and unfurled the unwonted sail on the boundless and unknown Atlantic.—Impatient of tried navigations, they explored the harbours of Spain, of Gaul, and of Britain; and, first of men, united the extreme east and west in the social link of mutual interest.

To such a people, pressed by necessity and prompted by expediency, holding an actual and demanding a logical intercourse with the most distant regions of the globe; eager to invent, and holding the premium of invention; enlightened in the arts of man, and despising the despotism of mythologies, we may patiently, and even cheerfully, with probability, and argumentatively, concede the discovery of a phonetic alphabet—a medium of discourse between the distant regions and ages of mankind.

From the people who discovered we turn our attention to the *period* of the discovery of that art which, while it enlarges, embellishes the human mind; and, in communicating and perpetuating inventions, accumulates the conveniences that solace the feeble frame of man.

Writers have more readily agreed as to the inventors than as to the *date* of the invention. It was not, however, till after the establishment of christianity that the question of the date of letters was

inhabitants.”—*See Dr. Keith on the Fulfilment of Prophecy, Chap. VI. p. 327, eighth edition, 1832.—Ed.*

agitated with an ardour adequate to the importance of the inquiry. The early fathers took up the subject with a fervour more creditable, perhaps, to their zeal than their discretion, and boldly attributed the knowledge of letters to the divine revelation of Jehovah at Sinai; whilst others, with a laudable anxiety to secure an authentic history, *ab ovo mundi*, referred the invention to Noah, and even to Adam himself.

To guard ourselves against extravagancies, and at the same time to concentrate the attention of our readers upon the nature and manner of our conclusion, we shall be guided by certain canons of inquiry, by whose instrumentality we shall endeavour to draw near to probability. It must, however, be kept in mind that, in the lapse of time, written authorities have been either wholly destroyed,⁴⁵ or sub-

⁴⁵ The destruction of ancient records may be attributed to three general causes. 1st, The physical operation of time; 2nd, The ravages of war; and 3rd, The rancour of religious feuds, which has operated as widely and as permanently as time itself. The first cause requires no explanation. The second is, in so many cases, mixed up with the third, that it is difficult wholly to separate them; and the earliest history we have of the destruction of literary productions is that by the eastern conquerors of Palestine, who, being fire-worshippers, held in detestation and destroyed the books of the Jews, by whom the rites of Molech were forbidden. The Persian kings from Cyrus the Great, in the middle of the sixth century before the christian era, held dominion over Judæa and Palestine, and the west of Asia in general, till the conquest of those countries by Alexander the Great, in the 4th century B.C. and the posterity of his general Seleucus, as the dynasty Seleucidæ, held them in like subjection, with few interruptions, till they fell (B.C. 65) under the yoke of Rome, of which they remained provinces till the Arabian conquest. Antiochus Epiphanes, one of the Seleucidæ (170 years B.C.), with every denunciation of severity, ordered all the books of the Jews to be consigned to the flames. Cambysses, king of Persia (530 B.C.), stung with religious zeal, destroyed the temples and monuments of Egyptian erudition. The learning of Greece suffered under the yoke of the Romans, whose distaste of letters was exemplified in the treatment of Carneades by the elder Cato. The records of the Romans had been previously destroyed by the Gauls. The soldiers of Cæsar destroyed the library of Alexandria (50 years before the christian era) which had been collected under the royal patronage and philosophic munificence of the Ptolemies, a dynasty which had governed Egypt since the conquest of Alexander the Great. In the following seven centuries, the savages of the north and the zealots of Arabia seem to have conspired, and, by the same reasoning, against the existence of an art so essential to the independence and happiness of mankind; and it would be difficult to determine whether the warriors of Odin or the squadrons of Mahomet had wrought the wider desolation on the productions of the human mind. The reply of Omar to his more considerate or less savage lieutenant, Amru Ebn el Ras, embodies the common sentiment of religious fanatics of all ages and countries, against

jected to interpolations and alterations,⁴⁶ from error or intention, which render questionable the seeming highest authorities; and a critical examination of dates⁴⁷ would involve the inquiry in inexplicable doubts, and bury it under an irremovable shroud of darkness.

the existence of useful knowledge. "Those books," said the devout Muselman, "that agree with the Koran, are of no use; and those that do not are pernicious." The libraries of Alexandria were a second time, after an interval of 700 years, consigned to the flames; and the 4000 baths of that vast city were supplied with the literary fuel of 500,000 volumes during the six months subsequent to the fanatical decree of the successor of the *self-styled* Apostle of God. In the beginning of the 13th century of christianity the insensate hosts of the crusaders pillaged the capital of the east, and the statues, the bustes and the bronzes, the paintings and the manuscripts, that had accumulated during ages in the public buildings and libraries of Constantinople, were sacrificed to savage ignorance or religious wrath. The scene was repeated on the capitulation of the cross to the crescent in A.D. 1453; and the zeal of Mahomet II. inflicted a *coup de grace* on the learning of the christians and the Greeks. I am acquainted with two instances of the destruction of letters arising especially out of the third cause, unconnected with the inhuman warfares that disfigure the society of nations; and I lament to connect with the zeal of Christians against Pagans, the mutual intolerance of Platonists and Pythagoreans. I would fain have left in oblivion the more remorseless zeal of Arian and Athanasian, whose adoration of the same deity might have taught reciprocal indulgence; nor have I space to hint at the thousand schisms that disfigure the christian church, each destroying or disguising the literary effusions of the other. Nation against nation, creed against creed, and sect against sect, have waged exterminating wars, destructive, as if conventionally, of the history, the poetry, the philosophy, and the religions of antiquity. Posterity may exult or lament over the destruction of tomes that would have confounded the wisdom of the wise, and withdrawn the uninitiated from the pursuit of modern and useful science.

** The alterations and interpolations of the works of antiquity pass the credence of those who are unacquainted with the subject. To supply an estimate of the havoc of annotators and copyists, it will be sufficient to call to mind the four quarto volumes of various readings, extracted from only 400 Hebrew manuscript bibles, published by De Rossi, of Parma, in the latter end of the last century.—(*Calmet*, art. Bible). This author has not informed us the result of Dr. Kennicot's comparison of 600 Hebrew MM. which, it is to be apprehended, has created some embarrassment. Whole books of scripture have been lost, while those admitted in some countries have been rejected in others. The Samaritans never admitted any books posterior to those of Moses, or the Pentateuch.—*Calmet*.

** In the determination of the date of authors, it might be reasonably expected, *a priori*, that the earliest in each language would be the most fabulous, as well as the most imperfect in style and conception. The pretensions of the Bonzees, the Brahmans, and the hierophants of China, of India, and of Egypt, will lead us to receive with caution ecclesiastical authorities for the antiquities of nations.

We shall, therefore, adopt a more general method of inquiry, and, commencing with the indisputable age of letters in Greece and other countries, shall ascend with caution to the earliest writer of whom probable record remains.

Our inquiry, then, in ascending into the obscurities of time, will be directed, as far as is practicable, by the following assumptions:—1st, That the date of an extant or recorded author will prove the invention of letters by, or prior to, such author. 2nd, That where records of authors cease, letters had but a short, if any, prior existence; and that such records may be supposed to have ceased where the succession or continuity of writers has ceased for many centuries. 3rd, If the first recorded authors of all known nations appear to be posterior to *one* author of one country, the date (and country) of that author will be the date (and country) of the invention of letters.

The rhetoric of Demosthenes, the metaphysics of Plato, the social philosophy of Socrates, the manly narratives of Xenophon and Thucydides, attributing the actions to the passions of men, without the admixture of divine agency; the highly-wrought dramas of Sophocles, of Euripides, and of Æschylus, are sufficient evidence of the existence of phonetic letters during and prior to the fourth and fifth centuries before the age of christianity; and it might appear as sceptical to suppose that such productions were unaided by the contemplation of anterior authors, as that they were addressed to a people unpolished by the prior reception of letters. The simplicity of Herodotus (the most ancient Grecian historian extant, as we ascend nearer to the days of darkness) is characterized by the credulity of those days; his probable histories of humanity are disfigured by his ready admission of mythologies; and a long blank of authentic history lies behind the middle of the fifth century before christianity, which has been filled and embellished by the imagination of bards and legendaries. The works of Acusilaus of Argos, of Hellanicus of Lesbos (who completed a real or imaginary history of the ancient kings of the earth), of Pherecides of Syros, of Dionysius and Hecataeus, both of Miletus, have perished amidst the wreck of time and the flagitious rancour of sectaries, or survive in the questionable form of extracts in posterior authors. The learned and eloquent Dr. Gillies, in denominating these latter historians (the earliest of whom flourished about 520 B.C.)^{**}

^{**} It is not, however, to be supposed, because no literary author existed prior to this date, that therefore letters had not antecedently been in use.—The probability is, that, for purposes of utility, they had been some time

"the first prose writers, or rather the first WRITERS," has quickened our scepticism in the pursuit of remote truths, and left us to conjecture that the sublime flights of Homer and Orpheus are rather collations from, than the creations of, those early associated names. The odes and hymns of the *αἰδοί* (aidoi, or singers) might have circulated through Greece traditionally many centuries (not, indeed, in the literal attire under which they still continue to charm) prior to their collation and arrangement by the master hands that have appropriated them; and the poetic and parallel attempt of Macpherson in an enlightened age will sanction such a hypothesis. But the *niche of time* in which those fathers of song have been placed is anterior to authentic history, and was as much the subject of conjecture to those who arbitrarily assigned them their chronological periods as to the learned of our own times. From Herodotus, who recited his history at the Olympic games, 445 years B.C. (according to the compilers), and from the cyclic poets, all anterior chronologies have been arranged; and some pains have been taken, in the beginning of these remarks, to point out the particular authorities on which our knowledge of ancient dates is founded.

The opinion of Dr. Gillies is startling to those who have fondly rested upon the received chronologists, and the letters of the afflicted Cadmus,⁴⁹ (1400 B.C.) the Orphean lyre,⁵⁰ and the epic of Homer,

adopted, both in private and publicly; first for mercantile transactions, and subsequently for the publication of laws and cosmogonies, &c.

⁴⁹ Cadmus is said to have introduced *letters* into Greece from Phœnicia, 1400 B.C. It is, however, incomprehensible that the *phonetic* letter should have so long existed amongst such a people, nor have awaked the written song of the poet, or inspired the plume of the historian. We are sustained, however, by history in our opinion that a sacred or *hieroglyphic* letter existed in Greece as well as in Egypt at that time. Orpheus, Musæus, Dædalus, Homer, and other eminent Greeks, are said to have learned the sciences of the Egyptians; and Manetho, according to Eusebius, expressly speaks of the doctrines of Hermes on the Seriadic columns as *αἰματινοῦσιν μετα τοῦ κατακλυσμοῦ ἐκ τῆς ἱερᾶς διαλεκτῆς ἐν τῇ Ἑλλάδι φωνῇ γραμματικῇ προσηλοφισαίς*.—"Having been translated, after the flood, out of the sacred dialect, into the Grecian language, in *hieroglyphic* writing."

⁵⁰ There is no work of Orpheus, or of Musæus, or of Linus, extant, and Vossius considers them "*non fuisse*," not to have existed. The fabulous presumption of Thamyrras and Marsyas, of Dædalus and Melampus, consigns them to the regions of the gods, as "lords of the manor" of all that is imaginary (as Bishop Cumberland pleasantly concludes) and of all that is absurd and improbable. Our opinion of Homer's works may be collected from the text. His name is known to all, but belongs to none; and if its proprietor existed he never laid claim to a period in time or a place on earth.

seem as a dream of infancy, with which we are still willing to amuse our second boyhood. The histories, however, of Egyptian and Chaldean, of Etruscan and Roman, of Carthaginian, Samaritan, and Phœnician, phonetic letters, are in probable keeping with the supposition, which, if it be impossible to prove it, affords at least a plausible solution of the question in hand.

1st, The policy of the Egyptian hierarchy had early taught the people to hold all seafaring persons and shepherds (the wandering and commercial Arabs) as impious and profane;⁵¹ and the same policy may have consistently operated in the exclusion of the phonetic letter from that oppressed race of men. The Bonzes of China and the Brahmins of India⁵² have, by like means, held an absolutism over the masses of their respective countries; and it was not till the middle of the third century before christianity that the first Egyptian writer, Manetho, a priest of the temple of Hierapolis, edited, in the phonetic alphabet and in the Greek language, an indigestible mass of mythologies, alike indicative of his own and his people's ignorance of all useful learning. Mr. Wise (in his *Inquiry*, &c.) is of opinion that that people (the Egyptians) was unacquainted with the phonetic letter till the introduction of the coptic under the Macedonian dynasty

⁵¹ Diodorus Siculus, lib. 1, and GENESIS xlii, 34, "for every shepherd is an abomination unto the Egyptians." Manetho (according to Eusebius, a father of the christian church) mentions a very ancient conquest of Egypt by the shepherd kings of Arabia, who cruelly entreated the Egyptians, and, after having ruled over the country 259 years, were induced to emigrate; and hence, perhaps, as well as from the apprehension of foreign communication, might arise that prejudice against the shepherds which, from the time of Joseph, continues (probably from like causes) to this day to prevail in Egypt.—*Neibuhr and Burckhardt*.

⁵² The Brahmins not only adopted a *peculiar letter*, but a *separate language*—an ingenious but base policy that was adopted by the christian priests of the middle ages and the catholic church, whence has been retained, by some of our ecclesiastics, *their* admiration of *dead* languages. The Egyptian priests had two kinds of dogmas, the one vulgar, *δημοδῆς*, and the other *secret* or *unspeakable*, *ἀπαρχντοι*, not to be divulged or made vulgar; and as they had two kinds of doctrine, so had they also two sorts of letters; *Δφασισι δὲ γράμμασι χριωνται, και τα μιν αντωι ἴρα, τα δὲ δημοτικα παλιωται*—"They," speaking of the Egyptian priests, "use two kinds of letters, one sort called sacred, the other, the people's."—*Herodotus in Eusebe*. Diodorus attests the same more fully:—*Παιδιωνδὲς δὲ τὸς υἱὸς οἱ μιν πρὸς γραμματα διττα, τα μιν πρὸς καλῶμενα, και τα κοινοτικων ἔχοντα την μαθησιν*—"The priests teach their sons two kinds of letters, one sort sacred, the other for the use of the vulgar doctrines." The present equal progress of knowledge and morals shows us that the concealment of truth is a dangerous as it is a base and unprofitable policy.

of the Ptolemies, or of Psammeticus or Amasis Egyptian or *Perso-Egyptian* princes. It seems, however, improbable that a character so nearly resembling the Grecian should have been adopted by native princes of Egypt; and that very similarity is a strong presumption that it was introduced by the Ptolemies, whose Grecian partialities may be supposed to have descended with the power they enjoyed from the Macedonian hero; and the introduction of a phonetic letter into Egypt may be dated in the end of the third or beginning of the fourth century before the christian æra.

2nd, The dissemination of letters amongst a people who could patiently witness or clamorously demand the sacrifice to their national idol of three learned Jews, may be doubted;⁵³ and history is unacquainted with a literary production⁵⁴ of the Chaldees before the Greek works of Berosus, a priest of the temple of Belus at Babylon,

⁵³ It must, however, be confessed that a history of the unhappy men who have died or suffered, since the invention of letters, in attestation of their religious convictions, from the christian to the atheist, through the thousand creeds and delusions that have bewildered mankind, would occupy as many tomes as perished in the two literary desolations of Alexandria, and ought to start the reason and excite the humanity of civilized legislators.

⁵⁴ I am not ignorant of the astronomical observations of the Babylonians, said to have been sent by Calisthenes (time of Alexander) to Greece, and which embrace a period of 1900 years—they were preserved as *monuments*; or of the passage in Pliny which states that Epigenes (whose date is unknown) knew of Babylonian observations of 720 years prior to his time, "*cocclibus lateritiis inscriptas*;" and that Berosus was acquainted with some of 488 years before his time. These passages at least do not corroborate each other; and the *burnt tiles* and *monuments* on which these observations were said to have been kept, rather than otherwise *negative* the existence of a phonetic alphabet in those days, as does most strongly the fact that the Persian Daric, the *first* coin issued in Persia, was without a phonetic letter, though struck by Darius Hystaspes so late as about 480 B.C. So great a king issuing the first coin in the east stamped with his head! Is it not to be supposed he would have inscribed his name on it? The concurrent testimony of coins is most valuable to our conclusion. The Assyrians, Medes, Babylonians, and Egyptians, had no coins. In the mouths of the mummies are thin, *un-stamped*, and round pieces of gold, to pay Charon's fare. The most ancient Greek coins have no letters on them; those of later date have ΑΙΓΙ and ΑΙΓΕΙΩΝ on them, the latter of which are very scarce, and, Mr. Pinkerton thinks, may belong to Ægium in Achæa; but the former, he thinks, were from the mint of Ægina, "perhaps the most ancient in Greece," and of about the date 600 B.C. To ascend higher, the Lydians invented coinage, but the Lydian coins have *no legends*. Indian and Chinese coins are of very recent date. The admission of a Jewish shekel into a cabinet would disgrace it, says the same author.

in the middle of the third century before the christian epoch. The policy, perhaps the fear of the priest, might forbid the use of the Chaldean character; but our Holy Scriptures are said⁵⁵ to have been written in that alphabet, by the learned Esdras,⁵⁶ as early as the latter end of the fifth or beginning of the sixth century before the christian æra; and no distrust can attach to an author who is thought, by many of the early and most learned teachers of christianity, to have restored the whole⁵⁷ of the Scriptures by the immediate inspiration of Jehovah. Of the Chaldean literature, then, the earliest record is about 500 years before Christ.

8rd, Of Etruscan literature we have few memorials, save the Etruscan Tables, which are referred by father Gori, their sensitive patron, to the second century before the Trojan war, the date and even existence of which itself must ever remain an open question; but we may not legitimately retire from the field of acknowledged history to hide ourselves in the darkness of monumental fiction or literal criticism, alike subject to error and open to imposture. The Etruscan character resembles, and is in all probability posterior to, the ancient Greek, the date of which must be referred to the sixth century before Christ.

4th, The establishment of the Roman name in the eighth century before the christian age, is not embellished by the early adoption of letters;⁵⁸ and arms, for many centuries, occupied the attention of that savage people, to the exclusion of learning. The first Roman historian, Fabius Pictor (his works have perished, and been substituted by an acknowledged forgery), is said to have flourished 225 B.C.

⁵⁵ By several eminent fathers of the christian church, Ireneus, Tertullian, Clemens, Alexandrinus, Basil, and others.—*Calmet*, art. Esdras.

⁵⁶ "He wrote out the *whole* in the Chaldee character."—*Ibid*.

⁵⁷ "Some of the ancient fathers" (of the christian church) says Dr. Prideaux, "held that *all* the Scriptures were lost and destroyed in the Babylonish captivity, and that Esdras restored them *all again* by divine revelation."—*Calmet*, art. Esdras. About this time Pythagoras taught his disciples at Crotona, in Italy, in the *hieroglyphic character* of the Egyptians and Chaldeans: he died 497 B.C.—See Lempriere's *Classical Dictionary*.

⁵⁸ 454 years B.C. it was determined by the senate of Rome, and by the body of the people, to establish written laws. Antecedent to this time, the edicts of the kings seem to have been received as legal authorities, and written laws were either rare or did not exist, as the royal will was commonly proclaimed by a herald. Three ambassadors were sent to Athens, to copy the laws of Solon; and hence were compiled the "*Leges duodecim Tabularum*," or laws of the twelve tables, which ever after remained the foundation of Roman jurisprudence.

5th, Of Carthaginian literature:⁹ we have little more than the tradition; the most distinguished colony of Tyre had wellnigh lost, in her struggle with palmy Rome, the possession of a name amongst posterity.

6th, Much idle controversy has arisen out of the question as to the dates and authenticity of the Pentateuch (or five books ascribed to Moses) and the posterior books of Holy Writ. That the whole of them could not have been written by an individual contemporary with the long series of ages of which they form the history, is an axiom disdaining illustration. Be their dates what they may, either they proceed from the inspiration of Jehovah, or are not his word: and the man of devout conformity will as readily bow down before the divine effusions of Esdras, or of the priest of Eserhaddon, as of Adam, or of Noah, of Shem, of Abraham, or of Moses. Their only authenticity is their divine process; and if the heavenly afflatus were extinct after the death of Moses, all posterior scriptures must be merely human; but if it were extended over the age of the prophets, then is their authenticity as incontrovertible communicated by Esdras, or the priest of Eserhaddon, as by the earlier prophets of Eloim.—The opinion of Le Clerc⁶⁰ is not at variance with the divine inspiration of the sacred books, and is in conformity with the probable chronology and authentic history of mankind.

Of Samaritan literature, then, there remains only⁶¹ the Penta-

⁵⁹ As much light is thrown upon our subject by ancient coins, so does the genealogy of alphabets—(see Astle on the *Origin and Progress of Writing*)—supply much curious induction. He allows the Phœnician alphabet to be the first. *From the Phœnician are derived*—1st, Ancient Hebrew or Samaritan: (i. e. Phœnician or Philistine, see notes ⁵⁵ and ⁵⁶).—2nd, Chaldaic: a mere dialect of the Phœnician, in which the Hebrew Bible is written (see note ⁵⁵).—3rd, Bastulian, or Spanish Phœnician: propagated at Cadiz (Gades), a colony of Phœnicians in Spain.—4th, Punic, or Carthaginian and Sicilian: propagated at Utica and Carthage, Phœnician colonies, and in Sicily, where the Phœnicians had numerous colonies. *Ἰσταν δὲ καὶ τοῖς Ἰσταν, οὗτοι πάντες μὲν ἐν Σικελίᾳ.* The Phœnicians dwelt round all Sicily.—*Thucydides*, vi. 2.—5th, Pelasgian, i. e. speciatim of Greece and Magna Grecia: Etruscan, Etruscan or Umbrian, Occan or Volcian, Samnic or Samnite, Ionic Greek, written from the left to the right.

⁶⁰ *Calmet*, art. Samaritans.

⁶¹ The cabalistical jargon of the Jews has been committed to paper in modern times. Their learned rabbin, Moses Maimonides of Cordova, 1132 A.D. states that “among the Hebrews were many mysteries formerly, but that they have all perished.” “Nosti enim Talmud ipsum inter nos receptum, olim non fuisse incertum librum deigestum, propter rationem istam, quæ tum passim obtinebat in gente nostrâ :—VERBA QUÆ DIXI TIBI ORE,

teuch, which is in the Phœnician⁶² character, and, as is supposed by Le Clerc, was written by the priest of Eserhaddon⁶³ about 670 years before the age of christianity.

7th, The opinion of Dr. Gillies applies cogently to Grecian literature; but Greek and Roman⁶⁴ testimonies assign the invention of letters to the people of Phœnicia; and those testimonies have been admitted by many learned antiquaries of all ages. The literature of the Phœnicians is handed down to us, in the form of quotation,⁶⁵ by the two fathers of the christian church, Eusebius and Theodoret; and the works of Sanchoniatho of Berytus, a small town to the north of Sidon and Tyre, on the coast of Phœnicia, had perished amid the wreck of time, had they not exposed to christian contempt the erring imbecility of a heathen and an atheist; whose date may be placed, in reference to pagan and sacred history, about the middle⁶⁶ or end of

NON LICET TIBI SCRIPTO DIVULGARE."—"For you know that the Talmud itself received among us, was not *formerly* digested into a definite book, on account of that reason, which at *that* time obtained *universally* in our nation, namely, it is not lawful for thee to divulge in writing the words which I have spoken to thee with my mouth." The writings of Sanchoniatho contained a history of the Jews similar to that of the Holy Scriptures, according to the christian fathers Eusebius and Theodoret.

•• "The Samaritans having received the Pentateuch (or the five books of Moses) from the priests sent by Eserhaddon, have preserved it to this day in the same language and character as it was then written in, i. e. the old Hebrew or Phœnician, which we call the Samaritan, to distinguish it from the modern Hebrew" (or Chaldee).—*Calmet*, art. Samaritans.

•• "He," Le Clerc, "therefore, imagines that the Pentateuch was composed by the priest sent to the Cuthites or Samaritans."—*Ibid.* This priest is mentioned in Kings ii. 28. "Then one of the priests whom they had carried away came and dwelt in Bethel, and taught them how they should fear the Lord." It is, however, somewhat enigmatical that the Samaritan Pentateuch was unknown in Europe till the sixteenth century.—Read *Calmet*, Samaritan.

•• Herodotus, 5, 58; Lucan, Pliny, Curtius.

•• The arguments in favour of the authenticity of these quotations are well sustained by the northern encyclopædists, in the article "Sanchoniatho."

•• The date of Sanchoniatho has been much disputed. By some it has been attributed to the time of Semiramis, 1900 years before the christian era. Sanchoniatho, however, refers to the building of Tyre as an ancient event.—Now the building of Tyre has been attributed to a time posterior to Gideon, about 1250 B.C. "All this," say the authors of the *Ency. Brit.* "may be true, but, if so, it amounts to a demonstration that the antiquity of Sanchoniatho is not so high by many ages as that which is claimed for him by Philo and Porphyry, though he may still be more ancient (as, we think, Vossius

the eighth century before christianity, and prior to whom history affords no credible record of a *phonetic* alphabet.

It appears, then, that the mercantile coast of Phœnicia was the country in which a phonetic alphabet was discovered, and that Sanchoniatho was the first writer in it, if not the inventor⁶⁷ of it. That not exceeding one century after its discovery, the Samaritan priest of Eserrhaddon wrote (about 670 B.C.) in the Samaritan, old Hebrew, or Phœnician character (for they were the same), by the inspiration of Jehovah, the sacred compilations of the *Pentateuch*, for the use of the Samaritan Cuthites, who, bordering on the Phœnicians, used the same language. That about 150 years posterior to that date, Esdras, by divine inspiration, transcribed or composed the whole body of the sacred compilations in the Chaldæan⁶⁸ character, in which they now stand, for the accommodation of the Hebrew priests, who, after the Babylonish captivity, understood only the Chaldæan language.

From the commercial necessities of the Phœnicians, the communication to the nations of the Mediterranean was coeval with the invention of the phonetic letter; and, after the lapse of a few ages of man, the people of Greece would avail themselves of an art that gave a visible existence to the raptures of the poet, the knowledge of the historian, and the demonstrations of the mathematician.

Such appears to be the probable date and origin of the phonetic alphabet, founded upon testimonies which may be, on a review of them, divided into two kinds—1st, Positive; and 2nd, Negative.

Of the former kind may be considered, 1st, The undisputed exist-

has proved him to be) than any other profane historian whose writings have come down to us, either entire or in fragments."

" Each discovery depending on abstract reasoning has been the work of an individual mind, and, although subject to improvement in the progress of human reasoning, has, in some degree, answered the intention of the inventor.

" *Calmet*, art. Esdras. We are bound by historical analogy to suppose that the language spoken by the Israelites, at the period of the exodus or leaving Egypt, where they had sojourned upwards of two hundred years, was that of the Egyptians. The above notes inform us, and historic analogy sustains them, that after their settlement in the promised land it was Phœnician or Philistine, for the epithets apply to the same people; and that under the Babylonish empire it was Chaldee. Profane history assures us that under the Macedonian dynasties it was Greek, and so remained till the destruction of Jerusalem and the posterior extinction of the lower empire.—The language of modern Palestine is that of Mahomet; and I am at a loss to discover a language which may be considered as belonging exclusively to the descendants of Abraham.

ence of authors in a phonetic alphabet to the time of Pherecides in Greece, and of Sanchoniatho⁶⁹ in Phœnicia. 2nd, The almost simultaneous and undisputed communication of that alphabet, soon after the time herein assumed for Sanchoniatho, over all the nations west of the Euphrates. 3rd, The actual existence of coins bearing that alphabetic legend as high as 600 years B.C.

Of the latter or negative kind may be considered, 1st, There being no undisputed record of any author in the *phonetic* alphabet antecedent to Sanchoniatho. 2nd, Our total ignorance of all human events antecedent to the herein assumed time of Sanchoniatho (who wrote a history of the Jews similar to that in Holy Writ, but which is generally believed to have perished), except those handed down to us by the revelation of Jehovah himself. 3rd, The existence of coins prior to and some time after 600 B.C. which bear impressions, but no legends; as the Persian Daric and the Lydian coins. 4th, The undisputed existence and use of the hieroglyphic writing prior to, and for a short time after, the date assumed for Sanchoniatho.—(See note ⁵⁴).

⁶⁹ Scaliger in the 16th, Vossius, Bochart, Cumberland, Dodwell, Stillingfleet, in the 17th, and Warburton in the 18th centuries, were the first to contest the existence of this author, and the authority of his extracts as given in Eusebius. The discussion ran to many volumes, as might have happened on the best accredited authors of antiquity. The dispute was fanned up by somewhat of religious zeal; and it is easier to see clear *without*, than *by*, the light extricated in the conflict. The European, if his attention be diverted from his own to the distant shores of Palestine, is dazzled by the coruscations of heavenly light that are shed over them; nor deigns his meed of applause, or his humbler tribute of gratitude, to the discoverer of the Phonetic Alphabet.

(To be continued).

FURTHER THOUGHTS ON EDUCATION.

"A **LITTLE** learning is a dangerous thing," is often argued by those who are adverse to the wide extent of education ; and perhaps there is no adage, founded on fact as this is, which has been more frequently perverted and misunderstood. Many construe it, that as danger is to be apprehended from the possession of a little learning, so would security necessarily be maintained by the continuance of ignorance. This cannot be. Man is endowed with reasoning and reflecting faculties, which render him a free agent, and place him above the brute. There are innumerable objects on which these faculties can be exercised ; and the power of exercising them is the highest privilege which he inherits. The goal to which all human exertion aspires is perfection ; and though this may not be obtained in all its purity, every approach to it is answering in a great degree one end of our creation. Therefore is it that to extend wisdom is to increase happiness ; because extension of knowledge necessarily furnishes greater opportunities of employing the talents bestowed upon us, while to sanction ignorance is at once to withhold a universal blessing, and to oppose the intention of the Creator as evinced in the mental constitution of man.

"A little learning is a dangerous thing" might be far more profitably construed by being supposed to imply the necessity of a constant progression in knowledge, thus converting the bane into the antidote. Knowledge, it may be said, is only dangerous when an equal degree of it is attempted to be indiscriminately bestowed, without regard to the respective condition of the receivers. In this case, it too frequently happens that the feelings of self-esteem and vanity are unduly called into action, whereby the legitimate progress of learning is crippled and retarded. "But as the abuse of a thing is no argument against its use, so the occasional evil which may have resulted from misapplied education is no argument against the advantage of freely and universally disseminating all kinds of useful knowledge ; ever keeping in view the different constitutions of different minds, and adapting the instructions to the peculiar ability of each, at the same time continuing to prosecute the improvement to the utmost extent of which the mental powers may be found capable. The ultimate constitution of the mind, together with the mode in which it acts in creating thought and directing action, will most probably ever escape human research. Its mysterious power

of impulsion can be only estimated by the effects which it produces. In infancy, we find the mind's manifestations few and feeble ; in mature life, its full activity is developed ; while in old age it again loses vigour, and finally appears to be exhausted. May not the indefinable, unappreciable principle of mind be the same in all these cases ; and may not the difference of exhibition proceed from the increasing and decreasing efficiency of the corporeal organs to obey its promptings ? Death can obscure, but it cannot extinguish, the light of immortality ; and though the medium may be removed through which the radiations of mind were made apparent, still the lamp will continue to burn on, drawing its food from that eternal source by which it was first created.

At what period of life should education commence, and what should be its duration, are questions often asked ; and they can be best answered by enquiring what education is ? Education may be said to consist in a certain discipline calculated to exercise an influence on the action and the direction of the various mental powers, as they are gradually unfolded through all their progressive stages. Now, as some of the mental manifestations display themselves from the earliest dawn of perception, and increase in number and intensity as the meridian of intellectual capacity approaches, it is, therefore, fair to argue that education should commence with the first indications of mental consciousness, and always keep pace with the developement of greater capability of intelligence. The faculties which appear first associated with human life are the mere animal propensities of hunger and thirst. The infant applies instinctively, or, as it is termed, naturally, to that source from whence it can draw the sustenance necessary to its physical existence. The perception of external objects next shows itself, but without consciousness of their relative or intrinsic properties. Indications of passion are soon exhibited, and love and anger alternately elicited. By degrees reflection becomes incorporated with impulse, thereby giving the ability to infer conclusions from the past, and to anticipate results for the future. Perception and reflection, in union with imagination, or the faculty of conceiving original ideas, form the materials with which the intellectual fabric is constructed, while the religious and moral sentiments, which in due time are manifested, and exercise so powerful a control over the destinies of man, constitute the cement which binds the whole together, and enables the pile to be reared to a height apparently immeasurable. Now it appears that the various mental powers are gradually and progressively developed, and are not simultaneously exhibited ; and as education

is allowed to be a most important agent in stimulating, or controuling, or modifying these powers, it may be justly inferred that its application is regulated to each faculty as it is brought into action by the perfecting of the mental economy.

Knowledge is only gained by littles; and it is by aggregating these littles that great wisdom is ultimately attained. At that period of life when the mind is chiefly occupied by the animal appetites and instincts, namely, in early childhood, constant care should be taken to restrain their exuberance and regulate their exercise. Education should commence as soon as consciousness is apparent, and the earliest emotions tenderly nurtured and directed; for if, by early indulgence or neglect, the natural activity of the passions is stimulated, it will produce such an effect on the character in after life, however its violence may be modified by circumstances, as will sully the brightest intellect, and bring bitter disappointment and misery on the most exalted genius. A bias may be given to the disposition and character at a far earlier age than is frequently supposed, and the future happiness or misery of the man through life may greatly depend on the vigilant care of the mother in studying the infant manifestations of mental action. The young branch may be bent at the will of the trainer, and will grow obedient to his hand; but the fully matured stem, when the restraining hand is removed from it, quickly resumes its native position. So it is with the human mind, as far as the animal propensities and moral sentiments are concerned. In childhood these faculties may be directed in channels where they will afterwards continue to flow; but in age they must be coerced by the force of circumstances, to make them deviate from their established course, and, that coercion removed, they at once obey their original impulse. As perception and reflection are developed, food should be provided them with a judicious and at the same time a most liberal hand; the powers of the mind are best called forth by constantly employing the instrument through which their workings are made palpable. Much has been frequently urged against the absurdity or impolicy, as it is termed, of endeavouring to teach children a mass of knowledge which their comprehension cannot grasp; and it must be allowed that this crowding on the mind mere mechanical learning may be carried too far: at the same time, however ingeniously they may point out the propriety of waiting until the intellectual faculties are developed by age, before attempting to call them into action, universal practice declares that early and regular study are the means best calculated to call forth these faculties, and to promote their most power-

ful exercise. System and order in arrangement of ideas are indispensably necessary to the attainment of excellence in any science. Now the habit of application induced by early routine study is, in this way, most beneficial; for if the knowledge then acquired be found in after life distasteful or unnecessary, the concentrative power of the mind, having been once stimulated, is readily exerted upon other objects, and forms, as it were, a fulcrum on which the intellectual lever may rest, and by which it may be enabled to accomplish its highest imaginings. Education has its empirics as well as medicine and politics; and there are found persons who both advocate and practice a system, as they term it, of free mental action, which they make to consist in allowing a child to exercise his own unbiassed inclination, not only in the selection of objects for study, but also as to the mode and time for gaining information. The arguments which these blind leaders of the blind use in favour of their plan is, that by putting aside all the trammels of previous opinion and prejudice the mind is thrown on its own resources, and thus is originality of idea promoted. They maintain that when a child feels the necessity of knowledge he will quickly acquire it, and that the reflective faculties can best educate themselves. A very short examination will prove that these conclusions are erroneous. In man, judgment is the produce of reflection directed by reason, and based upon a connected chain of inductions, which chain must have certain points or data on which to rest; for without these, right and wrong would be mere arbitrary terms. Now, if these data are not furnished from external sources, the mind will create them for itself, and thereby too frequently assume false positions, and will always exaggerate even correct premises. Experience of the past affords the best material from which to derive these steadying points for the chain of reflection; for, on ascertaining the consequences which have generally ensued upon certain conditions, we are enabled fairly to infer the present results that will accrue from similar circumstances.

The wise in all ages have borne testimony to the advantages arising from early and regular instruction. "Train up a child in the way he should go, and when he is old he will not depart from it," is a maxim which, though not always borne out in practice, is perfectly true in theory. The impressions of childhood are rarely, if ever, effaced; and the pursuits in that period of life are frequently found colouring the occupations of riper years. Individuals educated upon the principle of free mental action—that is to say, educated in direct accordance with their own inclinations—frequently are found

to possess considerable talent, as it is termed, particularly in the perceptive powers ; but their reasoning faculties are warped and perverted ; the conclusions which they draw are often ingeniously built, and appear fair and plausible ; but, as the premises rest on error, we can, by removing the foundation-stone, at once overturn the whole inductive structure. Submit every thing to reason, and let that be the test of truth or falsehood, say those who are ignorantly bigoted in their own powers of judging, forgetting that reason itself requires culture and instruction in order to develope its legitimate action, and is just as liable to be improperly stimulated as any other of the mental faculties. Besides, the powers of reasoning are greater or less in different individuals, and if these powers are made the universal arbiters, right and wrong become the creatures of vacillating opinion, instead of the offspring of fixed and immutable principles. The undue activity of self-esteem, arising from its early and constant exercise, in those individuals who have been permitted to obey only the impulses of their own imaginings, is shown in after-life by rendering such individuals superficial and self-sufficient, dogmatic and intolerant. They are fond of advancing what they consider to be impregnable positions, and maintain their opinions with all the tenacity and confident importance which usually accompany overweening vanity. Superlative wisdom is generally arrogated by these self-deluding philosophers ; and at the same time a kind of philanthropic contempt is entertained for all others less self-enlightened than themselves. All this arises from the circumstances of the reasoning powers being allowed to form their own standard of truth and error.

Notwithstanding the frequent reference to the march of intellect, as it is termed, in the present day, and the triumphant manner in which the increasing wisdom of the age is spoken of, it may be fairly questioned whether the human mind can be proved to possess any greater capabilities than it did four thousand years since. It is true that many discoveries in art have been made during the last two or three centuries, whereby a wider field has been afforded for the range of mental exercise ; but it does not follow that the finite extent of man's understanding, or the primitive powers of his comprehension, have been increased. If we take a retrospective view through the past ages of the world, we shall find that moral and intellectual perceptions have always existed correlatively, and have produced much the same effect through all times. The wisdom of the early Egyptians ; the acquaintance with various arts by the Greeks, as evinced in their letters, their architecture and sculpture :

the knowledge of the heavenly bodies and the celestial machinery, by the Chaldee ; the familiarity with the healing properties of many a plant and herb, by the Hebrews ; the skill of the Tyrian artificer ; the enterprise of the Phœnician mariner ; the geometry of Euclid ; the mechanical skill of Archimedes ; together with the vast works of art which commemorate the power and resources of the Roman empire, all bear witness to the great activity of the intellectual faculties, and to the influence they exerted, in remote days. Again, the moral precepts inculcated by the sages of Greece, with the codes of laws compiled by her legislators ; the uncompromising virtue advocated in the early commonwealth of Rome ; and the struggles against the inroads of vice and ignorance made by some of her poets and historians, during her transition to the imperial despotism ; the ethics of Confucius ; and even the purer parts of the Persian and Hindoo mythology, all testify of the passions and feelings which then influenced society, and of the necessity which was then acknowledged of endeavouring to control those passions by other than physical force. The subversion of all order, the utter neglect of every civilizing science, during the long reign of rapine and violence which succeeded the general irruption of the northern barbarians, all but annihilated letters, and effectually checked, for many ages, the advance of intellectual improvement. It is probable, indeed, that but for the influence which religion is found to possess over the human mind, that little or nothing would have been preserved in connection with the records and traditions of former days. The faculty of veneration taught the rude savage to respect the ordinances, and even the ministers, of religion. Superstitious dread frequently withheld the desecrating hand ; and the ruthless destroyer, who scorned alike fear and mercy, was often found shrinking beneath the terrors of supposed supernatural agency. Thus the cloistered cell, the cave of the anchorite, the wandering pilgrim, and even the deluded fanatic, became the repositories of the wisdom and the experience of past years. When at length the clouds of ignorance were dispersed, and the light of knowledge again dawned upon the world, many a dormant seed began to germinate, spreading wide its roots through the heretofore barren soil, and enriching the intellectual garden with many a bright blossom. Science was revived. Knowledge asserted its ascendancy. The arts prospered. Social intercourse, and the reciprocal dependance of communities on each other, were promoted. The deformity, the empty pageant, and the hypocritical austerities of religion were exposed. Its ameliorating influence was given free scope for exercise. Civilization advanced with rapid strides. By

the aid of printing, the wisdom of by-gone years was permanently recorded ; and the possibility of another intellectual chaos for ever prevented. Yet mankind are still unchanged. The same propensities which prompted, the same intellect which directed, and the same sentiments which controlled their actions, in the remotest ages, are still found exercising the same powerful sway. And it is possible that much which has been discovered and exhibited in science, during modern days, was not altogether unknown in ages far distant.

Knowledge, upon many subjects, perhaps, is more frequently revived than newly created. Now, if we admit that the human mind is, and ever has been, susceptible of the same impressions and actions, we shall obtain most important data on which to found rules for moral and intellectual education. A careful mariner, if about to traverse an uncertain and little-frequented ocean, would make himself thoroughly acquainted with the charts and observations of those navigators who had preceded him ; and he would endeavour to profit by their experience. In like manner, by carefully examining the opinions of the wise and worthy amongst the by-gones, and by accurately tracing the chain of cause and effect through the social system, we are enabled to collect from the past such materials as may serve to mark out the most advantageous course for the future ; and though occasional shoals and cross currents may appear where not expected, still many a sunken rock will be clearly defined, and many a smooth deep channel unerringly pointed out. In taking this retrospective view, we shall find that religion has invariably exercised a most powerful controul over the words and deeds of men. Whether we regard this sentiment as exhibited in the mysterious allegories of the Egyptian ritual, in the deified mortality of Greece and Rome, or in the followers of Zoroaster, the victims of Bramah, in the wholesale godhead of China, the innumerable varieties of pagan idolatry, or even in the respect once paid to the beautiful, simple, and spiritual magnificence of the Jewish dispensation ; if we regard it in all these, we can every where trace the all-potent action of the faculty of veneration. A principle so universal and so powerful must necessarily, if properly directed, become the most important agent in civilizing man, and in ameliorating his mental condition. Now there is no system of religion which has ever been promulgated, since the foundation of the world, which so completely and effectually associates and identifies the obligation to God and man, as does the fabric of the Christian dispensation. No morality is placed on so sure a base as the Christian morality ; for it rests on

the expressed authority of the Creator ; its theory is totally divested of all ambiguous fable, and encourages the loftiest aspirations ; whilst its pure practice necessarily involves every virtue, and condemns every vice. What a mighty means is here presented, by which to extend and exalt the powers of the human mind, and thus to promote the united advance of wisdom and happiness ! Beneath the outspread dome of this heavenly temple we may yet see consummated that glorious declaration of the prophet, that "knowledge should cover the whole earth as the waters cover the seas."

The faculty which prompts a sentiment of religion is, doubtless, implanted in every mind, though its legitimate direction may be governed by peculiar agencies ; but the innate impulse must exist ; the capability of specific action must be positive, or the responsibility of man cannot be comprehended. In mental education, the development of the faculty of religion ought to occupy the first care ; for it not only materially influences our present condition, but it also affects the destiny of our immortality. At the same time, it should be remembered that there are other faculties, both moral and intellectual, which have been given to us by the Creator for a definite purpose. Not one of these must be deemed unimportant. The exercise and cultivation of the sentiment of religion, to the entire neglect of the other mental powers, is not answering the end of our creation. The glory of the Deity is manifested in the beauty and order and the infinity of his works, as well as in the wonder of his revelation ; and the treasures contained in the storehouse of nature cannot be unfolded, unless the various powers of the mind are brought into action. The individual who professes to hold science to be of no value, and intellect but a vain display, is totally unable to comprehend the nature of man, and utterly incapable of estimating the wisdom and mercy of God.

E. M.

AN HISTORICAL SKETCH OF FRENCH LITERATURE.

II.—THE TROUBADOURS, AND THE RISE OF CHIVALRY.

" But I will make another tongue arise,
 in which exprest
 The hero's ardour, or the lover's sighs,
 Shall find alike such sounds for every theme
 That every word, as brilliant as thy skies,
 Shall realize a poet's proudest dream,
 And make thee Europe's nightingale of song."

Prophecy of Dante.

Of all the languages of Europe formed from the corruption of the Latin, the Provençal was undoubtedly the first in which memory attempted to preserve the works of the imagination; and the Troubadour's was unquestionably the first school of poetry which arose after the extinction of the Roman.

Lineal descendants of the Bard and the Scald, the Troubadours were equally well received in the castles of the great, and the court of the monarch and the hall of the baron were ever open to them. Dispersed through most of the courts of Europe, they created a love for their compositions, and gave an originality and a celebrity to their language equalled only by that which the best modern productions have given to our own. Thousands of poets—men of all ranks, from the monarch to the boor—flourished almost contemporaneously in this new language; and while it gained riches and respect for the obscure, it was considered both an ornament and an honour to the great. The first Troubadour who obtained any high distinction for his poetic talents was William IX. Count of Poitou and Duke of Aquitaine. This poet was born in 1071, and died in 1127; and in these, the palmier days of chivalry, emperors, kings, princes, and nobles, enrolled themselves as Troubadours, and practised "*El Gai Saber*," the Gay Sciences, as their poetry was termed. The Empe-

ror Barbarossa, though generally represented merely as the bloody conqueror and scourge of Italy, presents one of the earliest examples of that regard for the prosperity of literature which reflects so much honour on sovereigns, and contributes so essentially to their own immortality. As he was king of Arles, on which Provence is dependent, his court resounded with the wild notes of the Troubadours; and we know that he himself was no mean proficient in the fascinating art. The romantic, though doubtless true, history of the imprisonment of our own Richard I. (himself a Troubadour) in the *Tour Ténébreuse*, is too well known to need repetition here. Unfortunately we do not possess the *tenzon* which delivered the King of England from his captivity; we have, however, a *servente** which was composed by him in prison after fifteen months captivity. The spirit of calm dejectedness and elevated melancholy which pervades the whole of this poetical effusion of the lion-hearted king, renders it one of the precious monuments of this most interesting period. The success of a few inspired the rest with hope, and their united exertions impelled the Troubadours to perfection with an astonishing rapidity. Their name, their honours, and their reputation, extended far and wide; and the Provençal, far outstripping every rival, seemed at once to assume the place of the now neglected Latin. At once, however, the voice of the Troubadours was silent; and, after a brief, though brilliant, existence of three centuries, the Provençal was no more; and its eloquent and melodious productions, which erewhile formed the solace and delight of the fair, the brave, and the gay, were now cast aside, and ranked amongst those of the dead languages.

* The insertion of the two first stanzas of this most beautiful poem, with the translation by Burney (*History of Music*, vol. ii. pp. 238-39), will, it is trusted, be acceptable to all classes of readers; and we only regret that want of space prevents our giving the whole of this most interesting production.

Ja nus hom pris non dira sa rason
Adrechement se com hom dolens non;
Ma per conort pot il faire canzon
Prou si d'amis, mas poure son li don.
Oute i saron se per ma reenzoe
Soi fuit des yver pris.

Or sachon ben mi home mi baron
Engles, Norman, Pettaven, et Gascon,
Que ge n'avoie si poure compaignon
Que lalsames por aver en prison
Ge nil di pas, por nulla retraisoe
Mas anquor soige pris.

No wretched captive of his prison speaks,
Unless with pain and bitterness of soul;
Yet consolation from the muse he seeks,
Whose voice alone misfortune can controul.
Where now is each ally, each baron, friend,
Whose face I ne'er beheld without a smile?
Will none, his sovereign to redeem, expend
The smallest portion of his treasures vile?

Though none may blush that near two tedious years,
Without relief, my bondage has endured,
Yet know, my English, Norman, Gascon peers,
Not one of you should thus remain immured.
The meanest subject of my wide domains,
Had I been free, a ransom should have found.
I mean not to reproach you with my chains,
Yet still I wear them on a foreign ground.

It appears, to a casual observer, not a little singular that the merits and exertions of the Troubadours should not bear any proportion to their rewards and encouragements; and that *that* literature, which has served as the model to other nations, has not, amongst its voluminous collection of pleasing productions, left a single masterpiece destined for immortality. Rivals they had none, for such can hardly be called the men who, immured in their convents and shut out from the living world, were solely employed in the dull and tedious, though certainly useful, task of transcribing the ancient manuscripts which were mouldering in their libraries. Their profession, honoured by the patronage and encouragement of the Emperor Barbarossa, of the conqueror of Tancred and of Saladin, of our own Richard, as also of several other powerful monarchs and nobles, at whose castles they were uniformly treated with honour and respect, the path to fame lay widely open to them. With all these incitements and encouragements, however, they stood sluggishly still in their course, and, thinking little of literary fame and poetical immortality, clothed their first thoughts in their first phrases, and eagerly snatched a temporary reward and an ephemeral fame. As they had established in all parts of Europe a common poetical dialect, if any man of transcendent genius had arisen amongst them, it would, in all probability, have soon become the general language of Europe. The art, however, declined in their too sluggish hands; and at the end of the thirteenth century the Troubadour and the *Cantar Provençal*, the sweet songs of Provence, were—no more!

Chivalry, the fairest and most brilliant flower that the "Glorious North" has ever produced, had its rise with the Provençal poetry, and was, in a manner, the soul of the new literature; and to the Goths, barbarous as they were in every other respect, belongs the honourable claim of its production. The Greek and Roman women were uniformly excluded from the public eye, and bore little part in public estimation; they were confined to the exercise of the domestic virtues, and found their reward in the applause of the family circle. Under the Goths, on the contrary, the female character assumed a higher and a prouder rank. As they were believed to be endowed with divine and prophetic qualities, the women attended the public councils, heard the debates of the statesmen, and were called upon to deliver their opinions; sometimes, indeed, they were entrusted with the hazardous task of executing their demands, as it was barbarously, though shrewdly, remarked that predictions were best fulfilled by those who made them. They watched over the interest of the state,

considered its relation with other nations, and sought to improve its policy and extend its power; in short, they felt and bore, with the warrior and the statesman, the cares and interests of the community. In private and civil affairs, their authority was not less decisive; they were thought to have something divine in their nature, and the names of many of them, who were worshipped as divinities, have been handed down by history.* To these imaginary virtues, however, they superadded the real one of modesty, the violation of which was never pardoned. The reserve and coyness of a maiden were her most powerful recommendations, and the lover found, in the object of his adoration, a strict and rigid chastity. But as this equality of the sexes could not exist without a reciprocity of merit, the men, on their side, aspired to the praise of heroic valour. The reproach of a woman filled the coward with the bitterest sorrow, and stamped him with the most indelible infamy. "*Hi*," says Tacitus, "*cuique sanctissimi testes, hi maximi laudatores.*"† These virtues long continued to defend, reward, and perpetuate each other; and when the northern tribes had made their conquests, these principles, instead of being enfeebled by the change of climate and of manners, found ample room for growth and expansion in the feudal governments into which all these tribes eventually subsided.

Under the thrice-favoured sky of Provence it was that, amid a thousand little baronies, chivalry assumed those forms, alternately gay and serious, which are still so fascinating to the retrospective observer. And though it is to northern France that we must look for the lengthened romances of chivalry, yet we find that the earlier specimens of Provençal poetry display a veneration for its beauties, and, amid the degradation of the age, manifest a respect for honour, and a love of noble feeling. The women were still looked up to with respect and adoration, and were regarded as the judges of personal merit; and to some distinguished lady did the valorous knight ascribe the glory of his achievements, and dedicate his *lais*. The praise of his mistress was to the knight the spring of his valour and the source of his activity; her eye lighted in his bosom the fire of ambition, and to her were all his trophies consecrated; for her he

* "*Inesse quinctiam sanctum aliquid, et providum putant nec aut consilia earum adspernantur, aut responsa negligunt. Vidimus sub Divo Vespasiano Velledam diu apud plerosque numinis loco habitam. Sed et olim Auriniam, et complures alias venerati sunt, non adulatione, nec tamquam facerent deas.*"—Tacitus, *De Mor. Germ.* cap. 8.

† Tacitus, *De Mor. Germ.* cap. 7.

fought and conquered, and to gain her approving smile he would rush into danger, and cover himself with dust and blood. "*Ah ! si ma Dame me voyoit,*"* was the exclamation of the knight, when performing some hazardous feat of valour ; and to love "God and the Ladies"† was one of the earliest lessons in chivalry. Let us cursorily glance at the education which the novice had to undergo prior to his elevation to the rank of knight.

Every descendant of a gentlemen, or every free person, was allowed to bear arms, and permitted to aspire to the honours of knighthood, which he was, by a long train of services, prepared to receive. At a very early age he was placed as page‡ with some neighbouring baron, where he served the master, but more frequently the mistress, of the house, and in this school he acquired all the knightly virtues. The example of his lord, the emulation of his equals, and the company of the ladies, from whose number he was to select the accomplished fair one to whom he was to ascribe both his sentiments and his actions, infused in his bosom the zeal for religion, inflamed him with a passion for war and danger, and instructed him in all the arts of a respectful and modest gallantry. At the age of fourteen or fifteen the page was called from the exercise of the domestic duties, and was created "*écuyer*," or squire. His duty now was to accompany his lord in all his hazardous expeditions ; he also carried his armour, and held his war-horse until he was ready to mount.

* Saint Foix, *Essais Historiques*, tome i. p. 184.

† "*Les premières leçons qu'on leur donnoit regardaient principalement l'amour de Dieu et des Dames, c'est à dire la religion et la galanterie.*"—St. Palaye, *Mém. sur l'Anc. Cheval.* tome i. p. 7.

‡ The page was also called *damoiseau*, or *valet*. The last term was applied only to the sons of men of rank. Thus, Villehardouin, in his *Chronicle*, gives the title to the son of the Emperor of Constantinople. We have also several other instances from the ancient French romances. Thus, in the *Roman de Rou*, speaking of William the Conqueror, it is thus given :—

*"Guillaume fut Valet patit
A Falaise post et norrit."*

And again, speaking of Henry II. of England, we have—

*"Cinquante-trois ans plus sa terre justisa
Emprès la mort son père qui Valet le laissa."*

See also Daniel, *Hist. de la Milice Française*, tome i. p. 95-6 ; St. Palaye, *Mém. sur l'Anc. Cheval.* partie 1.

“ Ces chevaliers alor otez venir,
 Ces blancs haubers endoper et vétir
 Les écuyers ces bon chevaux tenir.”*

He now became accustomed to toils and dangers, and acquired by degrees the whole science of war. At the age of twenty-one arrived the long-wished-for period of his promotion to knighthood, and great pomp and solemnity testified his advancement to this dignity. The young aspirant was led by his relations and friends to a church, where he confessed his sins aloud, and openly declared his repentance and remorse. Absolution was then given him, and he was then left alone in the church, where he passed the night with patient vigils and pious meditations. In the morning, mass was performed with great solemnity by the priest, who afterwards took the sword and breastplate, which had previously been deposited upon the altar, and returned them with benedictions. The eucharist was next administered to him; and, having previously been bathed, to denote the purity of the state into which he was about to enter, he was dressed in most superb garments, and his sword and golden spurs (the distinguishing badges of knighthood) were put on. He then approached his chief, and, receiving a blow with a sword on his neck, he was dubbed a knight.—This ceremony was concluded with great merriment and feasting, and the *festum tyrocinii* (which was the term used by the old historians to denote the rejoicings attending the investiture of knighthood) frequently lasted several days.

When the warrior was promoted to knighthood, the tables of the sovereign and the nobles were open to him; and in those times no distinction could be more really honourable or more intrinsically important. If, by the chances of war, the knight was taken prisoner, his rank preserved him from all base or ignominious treatment, fetters and chains being deemed fit only for the ignoble. He was allowed to indulge in the richness of his dress and armour, and no one below his rank was allowed to wear gold, silks, or fur. In the field of battle the knight appeared on horseback, attended by his esquire. The principal strength of the then existing armies lay in their cavalry; the adroit and skilful management of a horse, therefore, was of the greatest importance to the warrior knight. The gates of every castle were welcomely thrown open to receive him; and the society and praise of his mistress inflamed in his bosom the fire of love, which more

* Thus sings Guyard, a Troubadour. *Alor otez* may be rendered in modern French *à leurs hôtels*.—Daniel, *Hist. Milice Franc.* tome i. p. 94.

than compensated for the toils and perils of war, and served but to feed his passion for arms. The dominion conceded to the ladies was by them deeply felt. Open to public admiration, they studied to deserve it; and intent on the fame of their lovers, and the glory of their country, their sentiments, their affections, were aroused, and as they were deemed worthy of consultation in great and important affairs, their sensibility mingled with courage, and they largely partook in the greatness which they communicated. To be ungallant to a lady was an unpardonable offence; the uncourteous offender was driven from the society of the brave, and the interposition of the injured fair one was frequently necessary to preserve him from death. The rank, duties, and cares of a knight, made him aim at perfection; his honour was as incontestible as his valour; his adherence to justice and his truth undeniably scrupulous. The utterance of a falsehood was an offence the infamy of which was indelible; and the offender was degraded from the rank of a knight. The public and solemn deprivation of all the badges of knighthood, such as the sword, the golden spurs, and the tearing from the body the different pieces of armour, which afterwards were bruised and crushed, appear to have constituted the principal ceremonies of the much dreaded degradation. Religion, however, lent her aid; and after a multitude of symbolic ceremonies, the recreant was dragged on a hurdle to the church, and the prayers and offices which are used for the dead were recited over his body.*

But these pure and stately manners were not to flourish long, and when, in the twelfth century, chivalry fell as a *military* institution, its punctilious honour and scrupulous principles were not to remain in force, nor was the brilliant purity of the knightly virtues to remain untarnished. A general relaxation of principles, and a shameful depravity of morals, prevailed; the women ceased to be the idols of worship, and, falling "from their high estate," they became the mere objects of incontinent desire. The talents which erewhile celebrated the achievements of war, and recorded the valorous deeds of the great and good, were now solely devoted to the passion of love; and it is to be regretted that few, very few, of the *sirventes* of the Troubadours, or the *fabliaux* of the *Trouvères*, can be read without a blush. The ladies, who did not appear in public until after marriage, vied with each other in the merits of their Troubadours. A handsome figure, as well as the talent for lyrical composition, was necessary to the

* Selden, *Tit. Hon.* part 2, chap. 5, sect. 38; St. Palaye, tome i. p. 320.

Troubadour, as it was his constant aim to gain the heart of his mistress; and the rite of matrimony, which formerly was so sanctimoniously observed, was now only wished for to be abused. No lady was without her poet: to compose verses was the surest way to preferment, and men of all ranks found it the surest recommendation to their mistresses. The artificial gallantry of the Troubadour often grew into reality, and the "ladye faire," who at first listened only to adulation, but too frequently yielded to an incontinent love. The enchantment of perpetual flatteries, of tender and impassioned vows, of alluring sighs and of seducing verses, conspired to corrupt the sex; and that cold, unconquerable chastity, that majestic and ceremonious dignity, and that scrupulous and fastidious delicacy, which in former ages had raised it above nature, had withered beneath the increasing immorality of the age. This universal depravity extended to the very privacy of the closet, and the devotee was taught to seek a mistress in heaven, and to look up to the Virgin with the eye of a lover, and to contemplate and apostrophize the graces of her person and the beauty of her mien.* The delicacy of former ages wore away, and, in the south of France more especially, peace, wealth, and a gay or giddy life, engendered amongst the nobility that spirit of voluptuousness, that propensity to vice, and that excess of gallantry, which are generally observed to precede and hasten the decline and fall of nations.

Having thus cursorily traced the rise of that great bulwark of the middle ages, Chivalry; and having partially shown its connection with the Provençal literature, we will, for a future article, reserve the account of the literary remains of the Troubadours and of their followers, the Jongleurs. We shall endeavour to show the reasons of their so rapid degeneracy and sudden decay.

CRITES.

* A celebrated Troubadour thus apostrophizes the Virgin:—"Je suis devant elle à genoux, les mains jointes, comme son très humble serviteur, plein d'ardeur dans l'attente de ses regards amoureux, et d'admiration de son beau corps et de ses agréables manières."—St. Palaye, *Hist. des Troub.* t. ii. p. 225.

(To be continued.)

THE MUSICIAN ABOUT TOWN.

When our last number went to press, the Philharmonic Society had not completed their series of concerts for the season. The eighth and last took place on the 17th of June, when Beethoven's symphony in B flat and Mendelssohn's M.S. symphony in A were performed. The band being more intimate with the former, it went off with satisfactory steadiness and precision; but both the band and audience have yet to make themselves acquainted with the poetry as well as the mechanical intention of Mendelssohn's music. The players are too easily satisfied with expressing the mere phrases (which a steam engine might be made to accomplish with equal certainty), and the majority of the audience, (for obvious reasons) are accustomed to judge of an author's composition by the manner in which it is performed. Such a course would be thought preposterous enough in the reader and auditor of an ode from Milton, or a play of Shakspeare's; and yet neither of these demand more nicety or exquisiteness in denoting the shades of tones in the enunciation, than are required to give a just expression to such a symphony as that of Mendelssohn's in A, which is distinguished by a placid and refined elegance of character, more especially in the *andante*—a lovely and old-fashioned melody, that might be supposed to have accompanied some plaintive legend; and in the finale, which is instinct with fanciful and brilliant thought; while in its orchestral treatment we trace the varied resources of a great master of combination. In nothing is Mendelssohn more distinguished than by his intuitive knowledge of the genius and capabilities of every instrument in the orchestra, and, above all, in combining them. A charming example of this faculty may be noted in the accompaniment to the celestial voices in the "Paul," and which is confined exclusively to the flutes, clarionets, bassoons, horns, and trombones, while the stringed instruments alone accompany the intermediate recitative of "Paul." Nothing can be in finer taste than the effect produced by the contrast in the above movement. This may truly be called the poetry of instrumentation.

At the same concert Mr. Sterndale Bennett performed his new piano-forte concerto in F minor. Well grounded in the highest principles of his art, and with a bias, both native and cultivated, towards the classical and the beautiful, this young composer has already laid claim to the confident and rational anticipations of his

countrymen ; and Mendelssohn has pronounced him a genius of whom we may feel proud. In the character, both of his compositions and performance, there is an evident feeling of self-reliance without assumption, and an independence of thought and action without fantasticalness or affectation of any kind ; indeed, he seems content to gain the approbation of those who honour the piano-forte compositions of Mozart and Hummel, Clementi and John Cramer ; and he produces all the effects to be desired from the instrument without display or trickery. In short, he appears to be one of Plato's men—the being who “ looks before and after,” and desires to do that which “ posterity will not willingly let die.” May our conjecture and his aspiration be realized ! The concerto alluded to above is distinguished by simplicity and elegance of design, with copious and ornate treatment. The subjects are closely and well followed up ; and the orchestral portion of the work, if not sufficiently full for the modern school of instrumental writing, was, to our taste, ample and satisfactory. In the andante (a beautifully instrumented movement) there is some exquisite discoursing between the wind instruments and the piano-forte. A composition like this is, in our judgment, worth all the affectation and lashing into enthusiasm of the *romantique* school in art—that trumpery apology for slovenliness and impertinence.

The Philharmonic has closed this season with a strong feeling on the part of every one in the profession, and of the most eminent for talent among the directors, that, to maintain its ascendancy, it must undergo an important reform in the management. There must be reform in the band ; there must be reform in the conductor's department ; there must be reform in the provision of new music for the season ; and there must be reform in the directory constituted to judge concerning the new music. The society are in possession, it is said, of many thousands in funded property. If this sum be not a provision in store for the decayed members of the society, (and we have heard that it is not contemplated as a fund for such disposal), it is clearly to be understood why there should be so much caballing to be elected into the directory, and why an incompetent majority there should warily desire that a “ candle-end and cheese-paring finance” should continue with regard to the non-remuneration of the highest talent, and the non-securing, for the exclusive benefit of the society, the best modern compositions. This system should be changed ; and there should be adopted instead a resolution to propose such terms to professors, both native and foreign, as shall ensure the first refusal of original compositions ; and, having

done this, there should be such a preponderance of talent in the directory as shall preclude the chance of a meritorious work being rejected because some of the judges are neither in advance of the age, nor competent to pronounce a correct opinion upon it ; and, yet more, that this preponderance should steadily dam out the pert and washy effusions of pretenders, who happen to have the good fortune to possess friends in the committee of management. There is no question that the close borough system, and consequently, one of palpable favouritism, has, for some years past, reigned triumphant in the Philharmonic Society ; and this dry-rot in the establishment, if not speedily checked, will infallibly bring the whole to the ground. Meritorious artists, who disdain to wriggle, truckle, and intrigue, have either been wholly neglected, or, if engaged, been visited with the *fussiness* of the pettifogging, or thwarted and annoyed by the jealousy, of the grasping and hungry.

The subscribers to the concerts have been much dissatisfied, this season, with the provision of new music that has been set before them, and yet more with the arrangement respecting the singers. In the high walks of the art, there has been no positive novelty in the article of composition ; and, as regards the vocal department, the defalcation has been almost as signally conspicuous. It is idle to answer the complaint of the subscribers by the stale truism, that our native singers have not the organs of the Italians. They have not ; but they possess considerably more various acquaintance with classical composition ; and this knowledge the directors did not convert to sufficient account. Upon most occasions, the singers were huddled together in concerted pieces, and those not sufficiently practised ; and upon other occasions they were allowed to undertake solos for which they were either not qualified, or which, as compositions, were not worthy of the Philharmonic Society's concerts. This department, then, demands especial attention and alteration ; and, in connection with it, the conduct of the band, in accompanying the vocal music, must be reformed. It is to be questioned whether any orchestra in Europe—certainly no orchestra in any capital where music is held in consideration—is ever heard to accompany a singer in the coarse style that distinguishes the Philharmonic performances. It may be an exceedingly good jest with the gentlemen of the band to “Burke” an unfortunate singer ; but it is very offensive to the subscribers, and, indeed, has been so frequently and generally expressed, that they will, no doubt, take an opportunity of signalling their disapprobation of this conduct on the part of the accompanists. Moreover, there is an evident disposition in the

performers to "slubber" their work, which they take no pains to conceal as a labour of duty and remuneration, rather than of love. The rehearsals (particularly of the new and the partially known symphonies) are both few and not unfrequently hurried. At the late Cologne festival, where Handel's "Joshua" and a newly-discovered composition of Sebastian Bach's were performed, Mendelssohn, the conductor, subjected the whole of the band to as many as *thirteen* rehearsals; and, in consequence, the performers not only knew the whole of their music almost by heart, but they had become acquainted with their author's intentions, and were practised in all the lights and shades in expression. When that elaborate work, the choral symphony of Beethoven, was revived last year, the Philharmonic band satisfied themselves, we have heard, with one rehearsal. From such an acquaintance, what more could be anticipated than a creditably correct playing of the mere notes?—a simultaneous union of effect and expression was out of the question. Spohr's "characteristic symphony" was treated with the like parsimonious justice. "They order these matters better in France," as any one may satisfy himself by attending the musical *re-unions* in Paris, and above all by observing the style of accompanying the voice which actuates the whole orchestra at the "Académie de Musique." To sum up all—knowledge, youth and energy must pervade the Philharmonic directory, or a general demand and preparation for incorporating a new society will be heard and set on foot. The first note has, indeed, already been struck in the pages of *The Musical World*, where there have appeared some severely vituperative articles upon the general mismanagement and inefficiency of the directory; and in the number for August 2nd, a correspondent, signing himself "An English Artist," has proposed the incorporating of a new society, to be held in the Italian Opera-house, where there will be the advantage of having the Italian singers. This, so far, is good; but when the writer grounds the desirableness of his new society, and the success of his plan, upon the single circumstance that it will be a "*fashionable* réunion," (which the Philharmonic is not), and "*fascinating* to the aristocracy," from the simple circumstance of its being held in Her Majesty's Theatre, one can scarcely forbear a smile of wonder as to what peculiar atmosphere of the profession the "English Artist" has inhaled, that he should, for one moment, entertain the idea that the class of music performed at the Philharmonic concerts will "fascinate" our aristocracy, and thereby render the new society a "*fashionable* réunion." The *exclusive* selection of modern Italian music would doubt-

less secure the patronage of the fashionable portion of our nobility ; but that is not the class of composition which the "amateurs" of the Philharmonic would tolerate. Our aristocracy—the fashionably-influential portion of it at least—are pleased only with modern music, and that of the newest mint. Her Majesty, who, one would have thought, from the character of her teachers, and consequently of her education, must have imbibed a different taste, has shown an exclusive preference for the modern Italian school of composition : for she rarely missed attending her own theatre throughout the season ; whereas, in contradiction to the reported high taste of her Majesty in musical matters, she was present at one performance only of the Ancient Concerts ; and then the Italian singers were summoned, whom Mr. Laporte had withheld from every other public concert in London, except those which were held in his own theatre ; while the Philharmonic Society, with its magnificent orchestra and unrivalled collection of symphonies, were not, in one single instance, honoured by the personal sanction and approval of her Majesty. The fashionable elite, therefore, of the aristocracy, are ill inclined to patronize that class of music which is the sole support of the Philharmonic Concerts, and for the performing of which the society was instituted. Its primary object was to produce, for the benefit of the profession and the classical amateur, the most sterling instrumental compositions of the great masters ; and it will continue to receive the exclusive support of these two classes till the "fashionable portion of the aristocracy" condescend to bestow their patronage on that which has already been received with rapture for years by their plebeian brethren.

The Italian Opera closed on the 18th of August, after a season of extraordinary brilliancy and success. Reports are, of course, afloat as to the amount of profit accruing to the lessee in consequence of this brilliant season ; and their range is somewhat fantastic, varying from 0 (zero) to £45,000. One theatrical statist, calculating from the average bulk of the audiences, concludes that his quotient in favour of the lessee cannot be less than the higher sum named ; while the green-room gossip and quid-nunc insinuates the edifying fact that the whole of the profits have been divided among the Jews, the ostensible speculator not having benefited himself to the amount of one farthing. Neither account is, probably, correct, nor, indeed, is either result of the slightest consequence. Whether Jew or Gentile have made a fine harvest by the predilections of the wealthy, we care not one straw ; but it were desirable that so powerful a body as our rich aristocracy should give a healthy tone to the taste-

ful sciences and arts in their countrymen, and not submit to be the dupes of humbug, more especially of foreign humbug. With the exception of the orchestra and the principal singers at the Italian Opera, and one or two of the dancers (for the majority of these are offensive posture-makers), the general management of that theatre is a disgrace to the country. In scenic effect, theatrical properties, theatrical illusion, machinery, and in all the minor details of stage direction and conduct, it is half a century behind Covent Garden ; with which establishment it will no more bear comparison than the old oil lamps of the last century in Grosvenor-square, can compete in brilliancy with the modern gas-lights in plebeian Oxford-street.— With their individual power and collective influence, what might not half-a-dozen noble subscribers achieve in the way of reform at the Italian Opera, if they were so inclined ? Under its present management, the stage business goes on with a perfect contempt of all scenic propriety and good order. The lessee appears to consider that the whole of his duty to his subscribers is comprised in the engaging of good singers and dancers, while the rest of the *materiel* is scarcely an affair of even secondary consideration : it may shift as it can for itself. The supporters of the establishment may rest satisfied with at most two or three new operas in the course of the season ; while, in the same lapse of time, at Covent Garden theatre the manager will have produced (and in a style of unexampled magnificence) half-a-dozen revivals from the highest classical school in the art, with almost the same number of original dramas. What important revival has Mr. Laporte brought forward this last or, indeed, any former season ? and what have been his new pieces ? Since our last number went to press, a virgin opera has been produced at Her Majesty's Theatre. We have been favoured with a composition which had not previously for months been running the circuit of the Italian, Austrian, and Parisian theatres. Mr. Balfe's "Falstaff" may not equal in merit the best productions of Pacini or Donizetti, but it was decidedly better music than four-fifths of that which we have heard in the same house from those fashionable composers. Yet "Falstaff" (perhaps because it was the work of a native) was endured only for three or four nights. This circumstance was the more mortifying since the "libretto" was positively respectable (for a modern opera), and the performers evinced a unanimous interest in the success of the composer. The piece had not received sufficient rehearsal ; and we heard that Lablache expressed a wish to have more time to study, and give that full and rich development to the principal character upon which the very existence

of the opera depended. On the first night, therefore, a want of his accustomed ease and fluency was perceptible. One benefit, however, may be derived by the English school, and reflectively by the musical public, from the production of the "*Falstaff*;" and that is, that since the Italian performers will condescend to learn a new opera for an English theatre, whether it may not be worth the consideration of the noble patrons of our Royal Academy, and of the science in general, to offer a handsome reward every year for the best native composition, with the best libretto, and to use their influence in having it brought out in their own aristocratic theatre. By this plan the English talent will be brought into the same arena with the Italian, and (national predilection aside) we should have no fear of the result with all unprejudiced men of science. So long as English talent is shut out from competing with foreign talent *upon the same field*, while the latter is unduly encouraged, so long will the native artist feel and write at a disadvantage. The same exclusiveness does not exist with regard to our painters. At the Royal Academy exhibition, and at that of the British Institution in Pall Mall, and which is supported entirely by the aristocracy, our artists maintain their dignity in the best possible fashion, by affording ready admittance to compositions of foreigners. Here native, German and French talent, are frequently brought together on the same stage, and to no disadvantage of the native artist. If the English musician were encouraged in the same liberal manner, there is no question that in a few years we should number the Ettys, the Wilkies, the Turners, the Landseers, the Calcotts, in the English school of music; for a more energetic people than the English, or one that will with greater manliness and constancy struggle against an obstacle, or that can with greater facility direct at will their intellectual faculties, does not exist in the whole world. What they have achieved, and are achieving, in the elegant arts, through clouds of difficulty, coldness, and embarrassment, is heroic, is gigantic. They deserve not the neglect of their wealthy brethren.

At the English Opera, which has for a few weeks past been open, under the principal direction of Mr. Peake, a new musical piece has been brought out, composed by the clever pupil of the Academy, young Macfarren, entitled "*The Devil's Opera*." The plot and dialogue are from the pen of the composer's father. Had the latter been as successful in his department of the labour as his son, we should have had a conjoined work exhibiting more than ordinary talent. But our musical dramatists are usually very unfortunate in the vehicle they employ for carrying out their compositions. Some

of the most meritorious dramatic writing of the English school for several years past, and which must have become eminently popular, had the incidents and dialogue of the pieces been ingenious and attractive, have died away for want of co-operative support in the outset to give them notoriety. The junior Macfarren, like almost all ambitious youthful composers, has, we think, been a little ostentatious in the instrumentation of his opera, and which is also a common defect in youth. This is at times displayed to the detriment of the vocal score. The character of his instrumental music, also, is not uniformly in keeping with his subject in the drama immediately before him. It is not comic; neither is it diabolic; and his overture is decidedly commonplace. Against these drawbacks may be placed some very pleasing vocal melodies; and one trio for female voices, in round or canon ("Good night! may slumber lend its balm"), which it were no extravagance to pronounce exquisite in character and ingenious in detail. There is also a very pretty *barcarole* in the second act, and a sweetly plaintive song for a tenor, "Oh, blame me not that I have strayed." The trio will, in all probability, become a favourite concert piece. The chorusses—indeed, the whole of the music, is strictly dramatic: we may, therefore, and it is with gratified feelings that we express the opinion, look with confidence to the future efforts of this meritorious young musician.

By the last annual report of "The Sacred Harmonic Society," whose performances are held in Exeter Hall, it is with much gratification that we notice the steadily increasing prosperity which attends all their movements. We take no ordinary interest in the transactions of this energetic body of amateurs; both for the beneficial influence which their performances are evidently producing with the middle and lower classes of society, in directing, regulating, and refining their tasteful perceptions; but also because we have watched its progress almost from its infantile commencement. This large association of five hundred members was originated by its present conductor, Mr. Joseph Surman, a man of unwearied perseverance and industry. He, with five or six associates, held their first meetings for the practice of choral singing in a small back room in the suburbs of the metropolis. With, of course, no audience to encourage them, this was the outset of their career; and by their last report, for 1837, it appears that their eight meetings for the year were held in the audience of fifteen thousand and thirty-five persons. The performances consisted of the "Messiah" three times repeated; Mendelssohn's "St. Paul" twice; the "Israel in Egypt," with a selection; Haydn's "Creation;" and Handel's "Dettingen

te Deum," with Mozart's "Twelfth Mass." One of their last performances has consisted of Spohr's "Last Judgment;" and which, although creditably executed throughout, failed in producing that effect upon the audience which we had confidently anticipated. The only approach to a spontaneous admiration manifested was at the impressive chorus, "Holy, holy, Lord God Almighty." But the fact seems to be that these unsophisticated listeners, being so accustomed to the gigantic construction and massive simplicity of feature in the chorusses of Handel and Mendelssohn, could not relish the everlasting modulations and chromatic progressions in Spohr's music. Those concerted movements, therefore, which have hitherto given so much pleasure to the cultivated musician—such as the quartetts and semi-chorus, "Hail, our Redeemer," "The graves yield up their dead, the seals are broken," and "Blessed are the departed," all of which are full of chromatic progressions and enharmonic changes—were listened to without emotion. It is true, that being excessively—we might say ostentatiously—difficult, and written only for first-rate vocalists, they received only indifferent justice in the performance upon the present occasion. But it appears to us that, from the very principle of their construction, the chorusses of Spohr are not calculated to produce an effect with large masses of singers; and for the reason already given. They are elaborate, in most instances exquisite, quartett movements, but frequently want the true choral feature; and the chief cause of this, assigned by a musical friend is, that the music of Spohr is constructed upon the chromatic, whereas that of Mendelssohn is upon the diatonic scale—and that is the scale of nature.

In the report of the proceedings of "The Sacred Harmonic Society," (the fifth from its commencement), it appears that the balance in hand is £393, 18s. 6d., an increase of £378. upon the previous year. This circumstance alone affords the members no slight ground of encouragement and self-approbation;—encouragement, not to relax in their exertions till they have funds to build a hall of their own (and which, with *firm union* and wise economy, we doubt not will shortly be in their power); and self-approbation when they reflect that this large and well-conducted association has been the unaided construction of a few individuals possessing neither aristocratic, pecuniary, nor professional influence; but is simply the result of excellent plain sense, business-like habits, an instinctive perception of that which is true and enduring in art, and last, though not least, of a wise determination to rely upon their own individual

energies and exertions. Most strenuously, then, do we advise them to continue as they have hitherto proceeded ; to seek no foreign alliance or incorporation ; to keep their power in their own hands ; to *engage* what professional talent they may require, and not to put themselves in a position to be influenced or dictated to by professional talent. Let them once become encrusted with the mildew of professional intrigue, and rottenness at the core will speedily follow. Leave professors to cope with professors ; but professors with amateurs, each possessing equal privilege, cannot consociate, because their *interests* diverge at every step : the amateur's is gregarious, that of the professor is single and exclusive. Let the members also ever bear in memory the services of the founders of their society, of them who have "borne the heat and burden of the day," in advancing them to the position they now hold. Let them jealously watch the actions, and reject the insinuations, of the busy and the envious. Many of the society will comprehend this hint which has been thrown out, and to what transactions it points. Nothing more certainly relaxes the sinews of a young association, and benumbs mutual confidence, than a wanton endeavour to shoulder aside its original founders. The above advice can proceed from no other than a friendly feeling, since the writer possesses not the slightest claim upon the society, either as a professor or member.

It may be worth the committee's consideration whether two or three, or even more, of their public meetings, should not consist of one miscellaneous act, and that to comprise a selection of the finest choral anthems and Te Deums of our great church writers. The Te Deums of Purcell, for instance, and the magnificent anthem of Blow, "I was in the spirit," with the vocal power of this society, would have an inconceivably grand effect, and, with such an aggregate, would form a new and interesting feature in musical performances.

Our report of the "Ancient Concerts," and the "Societa Armonica," for the season, may be comprised in a few words. The former, with an opulent library, such as can scarcely be equalled in the musical world, is content to repeat the most familiar movements of the most familiar oratorios—thread-bare songs and worn-out old glees—those selections being the least hackneyed, and, indeed, in every respect, the best, when Lord Burghersh was director for the evening ; and the Societa Armonica, with the advantage of obtaining the assistance of the Italian singers, on account of the meetings being held in the concert room of Her Majesty's Theatre, will, in all probability, deteriorate, if not fall to decay, for want of skill,

punctuality, method, and order in the administration. The inefficiency and slovenliness manifested in the conductor's department, upon several occasions during the past season, were the frequent theme for animadversion among the subscribers, and were echoed in no lenient terms by the critics in the periodical press. With their several resources, and under a spirited and effective management, these two societies would quickly rise into great importance; as it is, they are only a subject of regret or contempt with every one acquainted with their capabilities.

GENTLENESS IS POWER ;

OR, THE STORY OF CARANZA AND ABORZUF.

BY CHARLES COWDEN CLARKE.

IN the land of Tartary, some thousands of years ago, reigned a king whose name was Azum Beg, and he had an only daughter, called Caranza. Like all kings, and, indeed, all other men who are born to live upon the labour of their fellow-creatures, he possessed many virtues which nature had bestowed upon him, and many vices, which sprang from his unwise education and uncontrouled self-will. He was mild and generous to his attendants, munificent and parent-like to his subjects, so long as both the one and the other did not disturb his tranquility, or contradict his inclination: he possessed the quality (which some people even do not) of being amiable when he was pleased. But Azum Beg had very little self-government, and, like almost all spoiled children, he rarely allowed the welfare or even comfort of others to interfere with his own; as, indeed, we shall see hereafter, he was content to sacrifice his only child, rather than abandon the poor ambition of being an absolute monarch.—Azum Beg was royally obstinate, and purely selfish. Had he been nursed in adversity and schooled in endurance, he would probably have been a venerable man; for he did not act unjustly from a mere love of tyranny, neither did he bestow his favours with a miserly or grudging hand: but he wanted the magnanimity to bear misfortune,

and the true wisdom to think for others as well as himself when assailed by it.

The Princess Caranza was, in some respects, the totally reverse character of her father. She inherited all his stubbornness of will, and determination of purpose, with his generosity of disposition ; but she went far beyond him in the one, seeing that she could yield, and with the sweetest grace, when no worthy triumph was to be effected by holding out, otherwise she would have been torn in pieces by wild horses first : and in generosity she had learned that what would be that virtue in a poor or humble subject, in one holding her station was scarcely to be called a merit. She had learned that for a princess or other wealthy person to dispense large sums of money, or rich presents, was little more than giving herself pleasure, and no inconvenience ; and that, to be truly generous, she must submit to this in small things as well as where great good was to be obtained. It was upon this point that Caranza was unlike her father : her happiness arose from making all around her happy, but not in making them happy in order that she herself might be so—she would then have been selfish. She was gentle and kind by nature, and she was wise by education. The queen, her mother, who had been the only watcher and guardian of her conduct, was the daughter of a poor shepherd. Her uncommon beauty had caught the eye of Azum Beg as he one day rode out to hunt, when, with the wilfulness of one who had never known controul, he ordered that she should be brought to his palace the next morning. The second view of her fair and lovely features, together with her simple and honest speech, so wrought upon his mind, that in a few days he made her the partner of his bed and throne. The king, without being aware of it, had espoused a maiden whose mind was as pure as her face was beautiful. Sufeika (for that was the name of the queen) had been born, nursed, and brought up, in the school of adversity and toil — She had known many privations, and had learned to value the blessing of cheerful and active exertion. Her mind had never been debased by indigent misery ; and now that this sudden prosperity had come upon her, it was so far from disordering her well-balanced judgment, that she did not forget the class she had left, but constantly directed all her influence to benefit and exalt the members of it ; and, indeed, many of the edicts and royal ordinances intended to advance the interests and comforts of the common people, and for which Azum Beg gained all the credit and popularity, had been the result of the queen's suggestion and entreaty. This noble-minded

woman, who thought for others more than she thought for herself, was the worthy guide of her daughter's conduct.

Caranza had little to learn from her mother, whose intelligent mind, generous disposition, and gentle nature, she inherited. The point of her character to which Sufeika directed all her attention, was that unbending spirit of determination which stamped her the child of Azum Beg. The value of this quality for arduous enterprises, and mental as well as bodily endurance, she accurately estimated. Her care, therefore, was that it should assume the character of lofty and steady perseverance, and not decline into perverse and unreflecting obstinacy. To accomplish this, she accustomed her to reflect upon her own inclination before she proceeded to act ; to be cautious in doing that for which she could not after respect herself ; to observe the conduct of others, and, if possible, justly, at all events charitably, to interpret their motives ; and, lastly, to pursue no purpose which should give pain to another, unless by doing so she could benefit many.

Caranza adored her mother ; and as love will so engross the mind as to make us unconsciously not only imitate the actions, but even to a degree mould our features after the object beloved, so this beautiful specimen of humanity became the counterpart of her mother, with a spirit for endurance superadded, which, perhaps, under the same trial, Sufeika could not have equalled, certainly not exceeded.

It was a beautiful sight to behold this young creature when she went forth from the palace for the purpose of administering to the comforts, or hearkening to the sorrows, of some humble individual whose distresses had reached her ; and it was a heaven to listen to the tones of her voice (tender and mellow as those of the dove in a silent wood) as she soothed or cheered the objects of her attention and care. "When the ear heard her, then it blessed her," for "she delivered the poor that cried, the fatherless, and him that had none to help him." Her voice was a medicine to them ; it was soft and very cheerful. Despondency never entered her heart (which she proved when her trial came) ; her tones, therefore, always roused the dejected or downfallen, and after she had gone away the sweet recollection of them, together with the mild look of her deep, blue, innocent eyes, left an odour and a blessing behind, as of a wafted censur. Caranza had learned from her mother the value of useful occupation to every individual in society, however high, and, of course, however low, their place may be appointed ; and she found, by observation and her own example, that each individual has a separate duty to fulfil, besides that of administering to his im-

mediate necessities—which is, to assist his neighbour. Caranza considered all mankind as her neighbours. Though a princess, and, as might be supposed, one who had nothing to do the whole day but contemplate her robes and her jewels, or ride abroad upon her favourite camel, surrounded with attendants, she nevertheless contrived very fully to occupy her time with considering the petitions of the unfortunate, helping the industrious but needy trader, and supplying the utterly destitute with means to obtain a livelihood. She herself was never idle ; she could, therefore, with a safe conscience, require that all who applied to her for relief should show that they were ready, by industry, to apply that relief to a worthy account. One of her plans was, to purchase wares from the small merchants and beginners in trade, and supply those who had not wherewith to commence as traders. When these returned to the princess with the produce of their little store, she rewarded them with the half of their industrious traffic, and supplied them again and again with merchandize, till they were able to become purchasers themselves, as well as sellers ; at which period they received from their benefactress a public token of her approbation. Let not the reader smile at the thought of a princess, so many ages ago, acting in the way described. The world is not so young in wisdom as we wise moderns would fain believe ; the greatest and the best people that have lived have not had the good fortune to be recorded in history.

Till the age of eighteen, Caranza had pursued this course of conduct, blessing and being blest. But now the period of her trial approached. So fair, so good a creature, should have had no trials ; no furnace of affliction need have been applied to test the unalloyed purity of that gold. Yet was it well that she suffered ; for she was enabled to carry her unselfish principle to its utmost extent ; a great reform was wrought by her example ; multitudes were released from ignorance and suffering, and rendered happy ; while she prepared for herself a crown of honour—an amaranthine crown, woven with the blessings of grateful hearts, gemmed with the radiance of smiling eyes, and glorified with the light of celestial approbation.

The first sorrow which smote at the door of that constant and loving heart, was the death of the queen-mother. Sufieka died as she had lived, calmly, simply, without vain-glory ; charging her daughter to let her funeral be conducted with no other pomp than the attendance of such of her subjects as loved her while living, and cherished her memory when dead. The only testimony of affection and token of remembrance that she left with her child was, a

homely earthen pitcher that had been her constant companion in youth, when feeding her father's flock, and which she used in common for supplying the sheep and herself from the spring. This was the sole relic she had reserved of her humble state of maidenhood, and she enjoined her daughter to bear it with her wherever her future lot might be cast, as it would serve to remind her of her mother's simple and innocent origin, and check any rising thoughts of superiority in rank or station. "I die," said, she "with cheerful satisfaction, because I have fulfilled my destiny. I was granted but one image of myself to rear, and so precious is that one to my heart, so kindly has it yielded to my fostering hand, that I leave it without a sad thought. For we shall be separated only in the body, Caranza; my spirit will be ever near you, to cheer you in trouble, and comfort you at all times. I shall behold your opening eyes, and watch at your side when their lids are closed. When the storms of sorrow rise (for storms you must have), remember that your mother is near you, and be steadfast."

Without the city lay an extensive plain, and in the centre of it was a rising ground. Here Caranza, by the consent of the king, ordered that the last ceremony of disposing the remains of Sufeika should be solemnized. No troops attended the procession, no pomp, no pageantry. But the whole city, and all the country round, poured forth their thousands; so that, by the time the sun had just appeared above the edge of the plain, the area round the hill was one sea of population; and at that point of time issued from the city gate the corpse of the queen, borne on the heads of loving servants, and followed by Caranza alone; for as it was not the custom of the country that the king should attend any funeral, Azum Beg, rather than infringe the rule of a state ceremonial, was content to forego the paying the last tribute of affection to a virtuous and magnanimous consort. Azum was selfish; he therefore gladly pleaded an insignificant excuse for absenting himself, where he would have been the least important person in the procession. He could not afford the bereavement of state pageantry, trappings, and garniture. He remained behind, and was not even thought of.

They laid the dead queen upon a lofty pile of wood, made more inflammable by odoriferous gums, oils, and resin; and while the purifying element was performing its fierce office, Caranza, apart, upon her knees, with all the multitude following her example, awaited the consummation. Nothing was heard throughout that peopled space but the roaring of the fire and the smart chidings of the burning timber. When the sacrifice was completed, the ashy

remains of Sufeika were brought to the princess, who, with a deep sigh, enshrined them in the earthen pitcher, the early companion and expiring gift of her noble parent. As she prepared to return home, an affectionate "Farewell" rose from the multitude. Caranza's heart melted with tenderness at this devotion to the memory of her mother, and for the first time in her young life she felt the value of a good name. And so, with her simple pitcher (now rendered inestimably precious to her) she walked back to the palace, followed by that grateful people.

Very shortly after this event, Azum became involved in war with a neighbouring potentate, whose name was Aborzuf, a man endowed with a lion's heart and a lion's strength. Like the lion, too, he gloried in contention and existed by strife. Slaughter and blood were his pastime; blood was his daily food; blood was in his thoughts, his nightly dreams, and his waking acts sounded of blood: he ramped in blood. His power and bold ferocious daring made him an object of awe to the surrounding princes; while his own people never mentioned his name but under their breath. When he appeared abroad he was clad in armour and thronged with soldiery. They who should have been as his children fled at the sight of him, and huddled like a flock of sheep when the butcher enters the fold. Terror was the principle of his government; and by terror, and by fostering the instruments of tyranny, his soldiers, he ruled, or rather murdered, the wretched creatures who lay prostrate beneath his sword. But Aborzuf was not only a monster in mind—as a man, he was monstrous. When a child, his form was airy, frank, and noble—it was angelic; his disposition was mild, generous, and even magnanimous. "Oh, fairest flower! no sooner blown than blasted." We are but as we are fashioned; and it was the evil destiny of Aborzuf to be placed under the instruction and moral guidance of a demon in the outward form of God's fairest creation. This bad spirit, who had gained absolute dominion over the mind of his victim-pupil, had so perverted the early tendencies of his nature, that "evil had become his good," and deformity his loveliness. He had instilled into him the belief that, in order to hold, as it were, in the hollow of his hand, the wills and the lives of his subjects, he must be to them outwardly, as well as mentally, of another creation; he must terrify, and not assimilate. He therefore fashioned his body to correspond with his mind, and that was of hideous proportion and aspect. It was covered with a grisly hair; and to any one who *could* attentively look upon his face, that was evidently but a frightful mask—a loathsome scurf, that had crept over the young fresh-

ness of heavenly candour and beauty. One thing, however, the demon could not annihilate in his victim. Outwardly horrible, even appalling, he had made him, and mentally deformed and wicked; but he could not quench in him that spark divine, the *consciousness of good*. He had brought him to *hate* goodness; but with the hate had fortunately come the awe, and even the fear, of moral truth, and the holy beauty of loving kindness and long suffering. His perception, too, of personal accomplishment, had not been suffered to expire, yet was it converted into a fierce and animal passion. Every thing was to yield before the storm of his will; and his love, like his warfare, dictated submission or devastation. This was the king who, unfortunately for Azum, had become his foe.

The rare beauty and accomplishments of the Princess Caranza had not been the talk of surrounding kingdoms and provinces, without their fame having also reached the ears of Aborzuf. He immediately fired with the desire of obtaining possession of one that was an object of envy to all his brother potentates; and as, in a former contest with Azum, he had so weakened the power of that prince as to reduce him to the condition of becoming a tributary for the tenure of his crown, he felt assured that the simple signification of his will must produce an acquiescence with it on the part of that monarch. In terms, therefore, which wore rather the air of command than of a courtly treaty, he proposed himself as the consort of Caranza. Azum Beg was ill prepared for such an appeal, and still less inclined to such an alliance; but he knew his own weakness, and he more bitterly knew his neighbour's power, as well as his mental and bodily ugliness. Under any circumstances he could not have acted magnanimously in his present situation. He resorted to meanness and insincerity. An embassy was returned to the court of Aborzuf, stating that a treaty of marriage for the Princess Caranza was already in progress. Had the statement been true, Aborzuf would not have foregone his claim; but, by his emissaries, he knew it to be a deception. In the torrent, therefore, of his rage, he swore that in one month from that day he would be before the walls of Azum Beg's palace, and claim the hand of his daughter. "And tell your master," said he, "that if he then, in the minutest point, obstruct my purpose, I will tear his whole city to the ground, and bring the silence of the grave into his provinces. He knows me, and that, in my threats at all events, I keep my oath."

The result of this embassy stunned the whole court of Azum Beg, who, with an imbecile selfishness, wandered about his palace, weeping and wringing his hands. The news also quickly spread

over the city, and struck terror into the hearts of its inhabitants. In the event of either alternative (the refusal or acceptance of Aborzuf's terms), they were certain of being melancholy sufferers. In the one case, they would be sacrificed to his fury, or carried away captive ; in the other, they would lose the object of their (all but) adoration. Amid the tumult of apprehension and dismay, Caranza alone appeared to be calm and dignified. Her own resolution was quickly taken, and she would as promptly have acted upon it. But Caranza thought not for herself exclusively ; her father was to be considered, and the people with whom, by constant intercourse, she had formed an almost equal sympathy—that large brotherhood, whose joys she had participated, whose wants she had relieved, whose sorrows she had allayed, and whose strifes she had appeased. These were strong ties : yet did not Caranza wholly disregard her self-preservation ; for she was a mortal, though she had drunk deeply of that everlasting fountain that knows no taint of impurity. She, therefore, from the mere impulse of nature, first thought of her own safety, with that of her parent ; to secure which she proposed that without delay he should abdicate his throne, and that both should speed away beyond the reach of the tyrant. "Jewels we can take, my father, amply to protect us against dependance or casual need. And even should the calamity of destitution fall to our lot, never shall I lose sight of my mother's origin, and of my mother's spirit. I feel that I am now more than ever her daughter, and in humbleness and poverty will foster you as she did her parent. Never shall you know one privation beyond the pomp and service of royalty. The gentle ministrings of a tender and dutiful affection shall take the place of precise and unloving punctuality. For the cold obedience of a hired servitude, you shall have the quick forethought of a fond and dutiful child. The heavy frivolity and the airy substance of ceremony you will lose, it is true ; but in its place you shall have the large and weighty comfort of unbought, ungrudging attendance. Oh ! my father, the glory of dominion is a vain thing, except it go hand in hand with the desire to scatter the seeds of beneficence, and to water the growing flowers of wisdom, which is, universal loving-kindness. Throw aside this jewelled yoke, and cast away this costly emptiness ; but oh ! save me from the jaws of the lion, and yourself from the reproach of having abandoned your only one to his gluttony !"

This appeal staggered the faculties of the vacillating, prostrate Azum Beg. He would act generously, he would act magnanimously, had he ever once learned to forget himself, and to sink that

forgetfulness in consideration for others. Moreover, he was a man in years ; and a self-seeking youth never makes a disinterested old man. He had also, through life, been accustomed to the formality of council—the coldness of deliberation and the ceremony of delay and indecision had encrusted his mind. The limbs of his energy had stiffened and distorted with contraction ; he could not decide with promptitude, even in an affair of ceremonious observance : what effect, then, the sudden proposal of abdication-must have produced on such a mind and such a disposition may be conceived. It seemed to deprive him of breath and to envelope his faculties in a mist. He talked of degradation, of bereavement, of faded honour, and departed glory. He hoped that the future consort of his daughter had been misrepresented ; people are seldom so wicked (particularly those in high station) as the world described them to be ; every body possessed some quality ; in short, he wanted no cabinet council where his interest was concerned : but the question of abdication was an affair of state—the welfare of his people was to be thought of—a sacred duty—his future provision was to be arranged—his restoration (if feasible) to be guaranteed—every thing, indeed, was rapidly enough considered that would touch his own miserable comfort ; while his noble-minded daughter was all but overlooked in the struggle of self-sheltering from the impendent storm. (Reader, think not this picture overcharged : it could be identified to its minutest line and feature.) Azum Beg resolved upon three days reflection, after his council had been in close debate for a week. Caranza, sighing, shook her head and withdrew to her chamber, ruminating sad thoughts on poor humanity and her own future prospect.

In one fortnight from the day of his threat, Aborzuf, with his wild horde, were before the city of Azum Beg. The whole of the frontier army was driven in like leaves before a hurricane, and the conqueror with the news of his approach arrived together. Short and uncourtly was his summons, as might be expected. " For the sake of the fair Princess Caranza, King Aborzuf will forbear his assault upon the city of King Azum Beg till the morrow's noon ; when the prize of his hopes and present undertaking will be on her road from the city to meet her victorious suitor, or the bond of his oath will be straitened with an unpitying hand."

Now was there hurrying to and fro throughout the city. King Azum and his whole court were paralyzed. The streets were thronged with anxious groups of faces : women with children in their arms, and who seemed wholly unconscious of their burthens, hastened with pale faces from crowd to crowd, col-

lecting reports and retailing them for facts. Here, soldiers, singly or in pairs, who had fled from the frontiers, silent, ashamed, sullen, or answering with blunt and niggard speech the clamorous volubility of the artisans. The old people and the mothers hoped that King Azum and the princess would consider their people, and avert, by timely submission, the destruction of the city. The young, the ardent, and the prodigal of life, were for resisting the invader to the uttermost, and finally dying with the lovely object of their veneration in the flames of her palace. All was confusion and dismay.

In the palace the night was passed in hurried council—project after project, for gaining time, was proposed. Hour succeeded to hour, and no resolution was taken, till the princess (the innocent cause of the impending calamity, and there present) perceiving that it was reserved for her to conclude the conflict of opinion, and to disperse the storm that threatened the ruin of her country; with meek aspect, yet streaming forth dignified energy and benevolence, arose at the right of the throne, and laying her hand on the arm of her father, said—“In any other presence than this, I might now complain that the one of all our nation whose peace of mind and prosperity were most in peril, had been held in the lightest regard. When the enemy, however, is at the threshold, time is then most ill—indeed, it is never well—spent in uttering reproaches. To the purpose, therefore, of this assembling. It appears, lords, in my poor judgment, that there are three modes by which the threatened evil to our country may be averted or quenched; and in all these (woe is me!) must I be doomed to be the cause of much anguish, or the shedding of life in multitudes of unoffending citizens—or of undergoing an extremity of sorrow in myself.

“First, then, the evil might be quenched by flatly rejecting the imperious demand of the invader, and daring him to the accomplishment of his design; for we can but die; and so knit are the souls of our citizens in unity of love and devotion to the unworthy one now addressing you, that, although the foe would doubtless fulfil his undertaking, he would nevertheless do so at stern cost of trial and life; and if this were all, defiance and resistance to the death were our wisest alternative; but when I think, in the event of defeat, how the storm of retribution would rage, and destroy the helpless victims of its fury—and with tenfold horror, should the tyrant lose altogether, by her death, the object of his invasion, I cannot consent, lords, to purchase my safety or revenge at so sad a cost.

"The impending calamity might be averted wholly in my simple person, by the unwise spurning of heaven's choicest gift—life. I could, with a well-compassed artifice, foil my ravisher, and shiver in pieces the cup at the moment when its possessor was pressing it to his lips. And I fear not to do this—I fear not death; but I fear to do an unworthy thing—I fear to act cowardly. Endurance of evil with constancy is the truest bravery. Were it, therefore, only the offering of the most acceptable sacrifice to the memory of her who showed me, by her own blessed example, the beauty of steadfastness in all things good, I should perform the hard task now set before me. To-morrow, at the appointed time, I leave my father's house."

So saying, with a blushed cheek of modesty and maidenly consciousness, she left the council. The soft yet prevailing tones of her voice rang in the ears of all her auditors, each of whom, while he hallowed the victim, humbled his soul in self-abasement before the magnitude of the sacrifice.

The few hours of solitary seclusion previously to the solemnizing of the marriage ceremony are rarely passed by any maiden unaccompanied with perturbed and tumultuous emotions, even though the prospect of her future course of life appear placid, shining, and joyous. She is about to yield every prerogative, but that of thought, to the dominion of the stranger. She abandons her freedom of action to the controul of another she does not unerringly know; for the prologue to the drama she is about to enact is not always a faithful promise—nay, it is frequently a false guide to its intent, progress, and consummation. She throws a fearful stake. All may be a faithful prescript of after fulfilment, and all may be "false and hollow." Alas! for the woman who, after reaping the harvest of plighted truth, discovers in the rich garner of her stored affection the creeping mildew of doubt, mistrust, and unkindness. The bitterness of this lot, at all events, was not prepared for Caranza: she could have no misgivings—her career admitted of no doubt—a frightful certainty stared her in the face; and appalling as this was, it may be deemed preferable to the cruelty of a blighted hope. Her night was passed, like the felon's, in the stupor of sleep. The gentle, ministering hand of nature came to the relief of her over-strained faculties; for the outward calm and apparent self-possession of the sweet martyr, were but the personation of a lofty spirit, which could not descend to the level of selfish weakness that she saw around her.

Before the hour for leaving her native home—the scenes of all

her gracious thoughts and acts ; the home, every quarter of which was become precious to her, being connected with the memory of her sainted mother, whose spirit was ever present with and confirmed her constant heart—before the hour arrived that was to separate her from all she loved, Caranza was prepared to depart. Unlike her conduct upon the former procession, which was in character with the simple beauty of the occasion, she now arrayed herself in the most gorgeous apparel suited to the most festive solemnity ; she demanded the attendance of all the court pageantry ; the royal palanquins and the royal camel was brought forth. Every warrior in the city had orders to fill the train ; not a point was to be omitted which would swell the pomp and gaudiness of the parade in the common eye ; for Caranza knew that she was making an appeal to a common mind, and one, therefore, which, so far from being able to appreciate her native simplicity of character, would have construed the absence of regal accompaniment into a studied insult, and have been stung thereby into ten-fold exasperation. Azum Beg had signified his will to accompany her to the place of her destination ; for now the arrangements were suited to the educated habits and taste of the monarch. But the weak old man did not perceive that, by being present upon such an occasion, he was infinitely humbling himself in the eyes of the superior and delicate-minded among his subjects—that he was ostensibly sanctioning the sacrifice of his only child—that he was, indeed, conducting her to the altar. Caranza apprehended at a glance the misery of his situation ; and although he himself was incapable of feeling his own mental prostration, she could not endure such an exposure, for the native pride and delicacy of her heart were wounded through his self-betrayal and unconsciousness of true dignity. She, therefore, with animation and firmness, resisted his proposal, placing her objection, as regarded his order of mind, upon the safest ground. “ My own personal sorrows, my dear father, are sufficiently piercing, and they will demand all the added support of my blessed mother’s ministering influence and consolation to bear ; but the idea of your being subjected to the triumphal taunt or vulgar glory of your victor, would deprive me of all power of self-conduct. Contempt, bodily subjection, injury, I can endure—it is my sex’s inheritance ; but the author of my being must not be smitten with insult before my eyes. You must not accompany me. Farewell, my dear father ! May that Being who through life has been my friend (had he vouchsafed me no other blessing than such a mother as fell to my lot) comfort and sustain you ! Cherish the memory of your daughter,

as being the image of her. Be kind to all my poor pensioners ; I leave you them as my legacy " and with a choked voice she hurried from the room, followed by the streaming eyes and bewildered looks of her unfortunate parent. " Stay for the lords in waiting ! " said he, but she was out of reach of his voice ; and with an hysterical sob he sank into a chair.

Caranza was seated in her palanquin, and the procession had begun to move towards the city gate, followed by the whole population, every individual striving to obtain a parting look from the beautiful object of their idolatry. Numberless were the sighs, and the ejaculations, and the bewailings, and the heart-burnings, that arose from the mass, as her very lovely and gentle face passed before them. She made a strong effort to be serene, and even to smile, but the evident failure of the endeavour the more strongly smote upon their hearts, and their poor untutored sorrow overswelled all bounds. As she approached the city gate, a rush was made by the young and robust to gain a last look. She waved her hand, saying she " hoped soon to see them again ; " when the sound of her own voice at that place and juncture of time (the moment of quitting for ever all that was dear to her), burst the floodgates of sorrow ; and, bowing her head, she gave free course to the torrent.

Aborzuf waited the approach of his prize, his heart beating high at the success of his dictate ; and scarcely could he allow the princess to draw near to his tent, when, darting forward with the spring of a tiger, he was at her side, and with a chuckle of exultation seized her hand. His advance towards her, although partaking of the ferocity of his character, was intended to be anything rather than revolting ; but, indeed, he could not conceal the impetuosity of his delight. Caranza was prepared for an exterior of more than ordinary ill favour, and she was prepared for a savageness of manner ; her imagination, however, apprehensive and vivid as it was, had fallen short of both realities ; nothing like Aborzuf in either quality had ever before been presented to her. The suddenness, therefore, of his approach, added to the absolute contact with him, produced a revulsion which caused every nerve to throb and tingle with anguish. With great promptness and rapidity of utterance he ran over several common-places, ending with " Our royal brother and father-in-law, madam, has not seen fit to sanction our union with his presence : he no doubt has been well counselled. We will return home without delay." The order was instantly given, when the whole army struck their tents, and commenced a rapid retreat.

The unhappy victim had no sooner passed the frontiers of her own territory than she quickly perceived, both in the face of the new country and the complexion of its natives, how marked is the difference between the effects of a peaceable, fostering government, and one whose sole principle is self-aggrandizement, at the cost of comfort, and even human life itself. The land was barely and slovenly cultivated; the inhabitants, when they did appear in sight, were either squalid, listless, and dejected, or looked to be idle and ruthless banditti. The dwellings were far asunder, and were composed of palaces that seemed with instinctive suspicion to stand aloof, sullen and dumb; or of mud hovels that, in her own land, would not have been employed as a shelter for the beasts of the field. All whom they passed looked with an indifferent eye upon their future queen; for misery and oppression had closed their hearts. Her own yearned for them, while she thought to herself "If my life be spared, your condition shall be amended." Caranza was the bright-blown bubble of buoyancy and hope. Hope, constancy, and confidence in goodness, lent a cheerful serenity to her conduct in the midst of things evil. As an instance of this, during her journey, though she had not trusted herself a second time to behold the face of her companion, she could not avoid listening to his speech; and she derived some consolation from remarking that the tones of his voice gave a total contradiction to the reputed ferocity of his character. They were clear, soft, breathing, and earnest, and, as she thought, sincere.

Their travel had now concluded. They had arrived before the walls of Aborzuf's palace, which, for construction and aspect, might have constituted a sixth order in architecture, and have been named the "pure DESPOTIC." The sweet heart of Caranza ached when she beheld her future home; and it melted as into water when, in passing the enormous iron gates, she heard bolt after bolt grating behind her.

With a loathing to dwell upon details of horror and wretchedness, we pass over the nuptials: they were secret and hurried. Still less could be touched upon those sacred festivities which, under the most angelic auspices, are suffered to remain mystical and exclusive. The coronation was conducted with a boisterous yet melancholy splendour; no citizen felt an individual interest in the personal joys or comforts of his ruler, because their several interests were divided. Yet they could not look with indifference upon the heavenly face of their young queen; for it beamed goodwill towards all, and they felt that the sun of blessedness had risen upon them.

Not many days—not many hours—after having become the consort of the tyrant, the gentle stranger was compelled to be an eye witness of his wanton cruelty. A heavy contribution had been levied, by his order, upon the commonalty, for the purpose of defraying the expenses of some former wars. A citizen, who had been summoned by the collectors to pay his portion, complained that not only the soldiery, but that every individual connected with the court, were exempted from contributing to the tax; and he moreover threw out, in his bitterness, an indiscreet hint that Aborzuf had very good and sufficient reasons for keeping the soldiers and all about his person in good humour with him. The time-serving tax-gatherers reported this discontented speech, and as busy an officer conveyed it to the king, who in a transport of fury ordered the seditious to be instantly arrested and brought before him. Caranza was present upon the occasion, and entreated him not to take the sword of justice in hand with a heated and resentful spirit. “Madam,” he replied, “so little have I been accustomed to advice or dictation, that I shall compel your presence during my examination of the rebel.” He then led her forcibly by the wrist into a courtroom bordering upon the presence chamber, where he was accustomed to try offences and award punishment. The miserable delinquent was placed before him, and at his side stood a ruffian with a drawn sword. A single question was asked of the witnesses as to the truth of the reported speech, which being repeated, Aborzuf gave an accustomed signal to the by-stander with the sword, who had the grace to hesitate, awed by the benignant and imploring look of the queen. “Strike, villain!” said Aborzuf, in a voice of thunder; and in an instant the sufferer’s head rolled upon the floor, while the body, in a torrent of blood, fell towards the judgment-seat. Scenes and acts such as the above were the subjects of almost daily occurrence. In a tumult of horror the gentle Caranza reached her chamber, where, in deep affliction, she laid her cheek against the homely earthen pitcher, and in tones of passionate sorrow implored guidance and protection from the divine spirit that once animated its earthy contents. When her prayer was ended, a soothing influence crept over her mind as from some mild narcotic, and she distinctly saw her mother’s form, and heard an injunction to “remain steadfast to her faith in goodness.”

Upon every event of oppression and cruelty on the part of Aborzuf, Caranza observed that he uniformly avoided meeting her sight. Bold and bad as he was, the devil in him ever “looked abashed” in her presence. His first attempt to overawe her mild nature by his

wanton murder of the citizen, had totally failed ; and he felt this. He disgusted, shocked, but could not frighten her ; and this consciousness of inferiority stung him into madness. Whenever, therefore, he had committed some act of wholesale enormity, he usually absented himself, upon a pretended hunting excursion, for a few days. These days of recess from pain and brutality were uniformly turned by Caransa to a golden advantage. She would seek out the families of those who had suffered from tyranny, and by her sympathy and worldly comfort redeem, so far as lay in her power, the melancholy privations they had undergone. With an extraordinary assiduity, too, she had brought her former plan, pursued towards her own people, into action ; very partially, indeed, for the oppressed, the degraded, and the mistrustful, are ever slow at improvement. Nevertheless, in a few months so much good had been effected, that the report of it reached the ears of Aborzuf. His envious rage now knew no bounds. He stormed from room to room of the palace, till he came to the small private apartment devoted by Caransa to her meditations and communions with the spirit of her sainted mother. Here was enshrined her poor pitcher ; and here he disturbed her as she was singing, in low and sweet tones, a hymn of praise and gratitude to the giver of all good, for the blessing of hopeful thoughts, and of such a mother as rarely falls to the lot of mortal. In frightful contrast with her soothing voice and tranquil occupation, he taxed her, in a tone of frantic vehemence, with plotting against his government ; and before she could reply to his insane charge he seized the pitcher, and knowing it to be a relic she prized above every earthly gift, he dashed it through the casement. It fell without the wall of the castle, and was scattered into fragments. With a piercing cry of grief, the devoted creature sank for a few moments upon her seat, then, collecting her thoughts, she approached her torturer with a look of dignity and emotion that quelled for a time the storm in his transported and fierce mind ; while, in a fervid strain of complaint, and with a strength and energy of tone she had never before been called upon to exert, she said, " Months have passed away, Aborzuf, since you tore me from my home. I was made the victim of your unjust power ; and though a feeble and an unprotected maiden, you have never, in one instance, made me a compensation for the sacrifice to which you doomed me. In all these months I have known no happy moment, except when in the exertion of that simple office which you would now wrench from me—the comforting the afflicted, and the making my fellow beings happy. Do not suppose, however, great as is your power, that you are enabled to bend

me to a course of life which my soul disapproves—nay, lift not your hand till I have ceased to speak, and then act according to your will. I fear not to die, Aborsuf: you do, because you are conscious of a reproving heart. You may torment, you may kill me, for I am but as a moth in your hand; but as long as I live you never can, and never shall, prevent my seeking my own happiness in the way I have been trained, and which I hold supreme. You have this day, in my own person, crowned all your former acts of unkindness and cruelty, by depriving me of the only remnant that linked me with her whom I prized beyond the whole world. You have dishonoured the ashes of your wife's parent. You have vilely scattered them abroad. But mark me, Aborsuf! If, in pursuing your violent course, you do not meet an answering death, you will bear witness that as the winds shall carry those light ashes over this city, so will the spirit that inhabited them pervade all your land. The seed is sown, and you will now vainly endeavour to root it out." Then, looking him in the face with that divine aspect owned only by transparent goodness and simplicity, she concluded, "I leave you, with the prayer that the influence may descend upon you of repentance, with the reformation of just and holy deeds." As she was going towards the door, however, he darted forward, and, seizing her arm, threw her into the middle of the room, exclaiming, "We shall see who is to conquer, your mother's spirit or your lord and sovereign. You will now consider yourself a prisoner, till you give me your bond of oath to act only according to my commands." He then flung out at the door, which he locked behind him, giving orders for no one but the person he should appoint to approach the queen.

Day after day, and week after week, thus passed by this heroical, yet gentle creature. No inducement, no privation, no threat, could extort from her the abandonment of her principle. The tyrant, although kept in a state of furious fever by her steadiness and serenity, could not conceal from his own soul an involuntary respect towards her, for, indeed, the mere tenacity of purpose that she manifested struck a responsive chord in his own breast; and but for this sentiment (much as he loved her, after the habit of a sensual and self-willed worldling), he would quickly have cut the gordian knot of his annoyance by hurrying her out of life. After the lapse of a few months, during which time the people, upon missing the kind face that so frequently used to come among them, had begun to indulge in conjectures. These increased into open murmurs, ending in threats of no equivocal character. Their many torments and oppressions had

stung them into the mad bravery of despair. Groups of the poor citizens were seen conversing in under tones. Their movements, with the various expressions that had been suffered to escape, were reported to the king, who, with the confidence arising from an unchecked sway, determined to crush in the egg this rising popularity of his queen. For this purpose he ordered that the troops always stationed about the court should divide into parties, and, patrolling the streets, disperse by force every company of citizens conversing together. The mercenaries of a tyrant are usually faithful to their employer, for his existence depends upon making it their interest to be so; fortunately, however, they are as rarely actuated by the stubborn bravery which springs from devotedness. This was the case with the troops of Aborzuf. They executed their commands with the punctuality and unfeelingness of mechanism; but they had not committed a second act of barbarity before (as if by the firing of a train) every quarter of the city burst into a blaze of open rebellion. The soldiers were overwhelmed, and borne away in the fiery torrent. They might with equal chance of success have stormed a volcano. They who formed the rears of the corps, and could effect their retreat, precipitately withdrew to their fortification, the palace. The news of their reverse (an event upon which the king never even dreamed of calculating) struck him, for the instant, motionless as a stone. But the next moment placed him in full possession of the command of his faculties. He saw that every chance of success must now depend upon his personal energy. Accordingly, putting himself at the head of the retreated troops, he was quickly in the heat of the fray. The presence of Aborzuf, for a time, checked the confidence of the multitude; his known personal valour and unwearied good fortune had invested with a charm whatever he undertook. The tide, therefore, began to ebb; the populace staggered, and gave ground. The king, perceiving his advantage, availed himself of it with promptitude and fury. His charge was terrific; he was seen in all quarters, animating his soldiers, his voice rising above the storm, and piercing the air like a trumpet-charge. In a better cause he would have been deified; as it was, he inspired admiration and awe. If everything, however, depended upon himself whether he should remain conqueror, or become less than a cipher—an outcast, a corpse, or at best a prisoner; his opposing subjects had risked their all upon a no less tremendous stake. With a simultaneous impulse, therefore, they rallied, and once more threw their enemies into confusion. Still the king remained in the rear of his routed soldiers, exerting an almost miraculous energy.

when, at the very threshold of his castle, falling, exhausted with toil and wounds, he was dragged within the barrier, and the gate closed. As he was being carried to bed, he roused himself sufficiently to give orders that the queen should be released from her chamber.

Caranza had been a spectatress of the conclusion of the struggle, and upon leaving her place of confinement the sounds reached her ears that the people were forcing the outer gates. The thought immediately occurred to her that she might be able to stay the fury of the assailants. Relying, therefore, upon the affection with which she was universally regarded by them, she entered a sort of balcony above the entrance of the castle, just as the whole tide was pouring into the court, roaring for revenge upon their oppressor. The scene of their passion now rapidly changed; for upon beholding her pale and sweet face, who they undoubtedly thought had been quietly murdered, their shouts of triumph rose into a frenzy of delight. Still they made a movement to enter the building to search for the tyrant; when she signalled them into attention, and then, in short sentences, deplored their sufferings and the cause of them; and as she knew that they could trust her word, she promised, if they would return peaceably to their homes, that no effort on her part should be omitted to indemnify them for the past, and guarantee the future. "I," said she "will now be your sovereign and protector, and if I fail to fulfil the pledge I have given, my life be in your hands." Oh, how lovely, how divine a spectacle was it to behold this personation of Power in Gentleness! to see those small, beautiful, and soft features, presented to the frightful distortions and turbulent passions of an exasperated multitude, reeking with blood, dust, and sweat; and to hear those peaceful tones coming against harsh discords of anger, "smoothing the rugged brow of 'that' night!"

Having so far succeeded to her wishes, she selected from among the principal citizens men of good repute, to carry into execution the first part of her promise (that of being their protectress as well as sovereign), by relieving those families that had become destitute from the death of their chief supports, and providing assistance for the wounded. This unexpected act of attention to the comforts of the people, coming so quickly upon the heels of their resentful feelings, confirmed the calm that had succeeded.

The next duty Caranza had to perform was not so pleasant an one—it was that of visiting the wretched and misguided cause of all the sorrows that had befallen herself, himself, and his unoffending peo-

ple. The most pitiable condition to which humanity can be reduced is, the enduring of bodily pain with an upbraiding heart. Like antagonist powers in mechanism, each acts upon and strengthens the other. Aborzuf was, in every point of view, an object of commiseration to a humane and reflecting mind. He was a specimen of a nature primitively good, but which has been distorted in the training. He was a man of fearless courage and unbending pride, who had been vanquished by a mere mob. He was deplorably wounded ; his career of life, he knew, had been little better than one scene of violence ; he was in the momentary expectation of a fate to which that of the common felon is enviable ; and, to complete the catalogue of his miseries, the conviction that he had not attached to himself one affectionate heart, smote upon his own with unpitying retribution. In this state of body and mind he lay, alternating groans of anguish and exclamations of remorse, and which, at times, bordered upon delirium. Caransa for some time stood at his side, without his being conscious of her presence. At length the sound of her voice in a degree recalled his scattered faculties so far as to enable him to enquire where he was, and to demand something to drink. His ministering angel answered the first part of his request, adding that all was peaceable without ; and in complying with the latter she mingled a mild anodyne with his draught, which soothed him into a refreshing sleep. When he awoke the same attendant was at his side, ready to anticipate his wishes and necessities. With a hand soft as settling gossamer, and a promptitude and assiduity in which woman ever will remain unrivalled, she dressed his wounds and arranged all his little comforts. Her foot-fall about the room was inaudible, and her answers to all his questions were low and cheerful. When he desired to know how the fight had ended, she pleasantly answered by desiring that he would use his endeavours to be quickly recovered, and all should be told him. This state of things continued for many weary days ; at length, after a month of severe suffering on his part, and of unmitigated attendance on her's, upon one occasion, while she was performing for him some little office of gentleness, and that he had continued thoughtfully musing upon all her generosity, she was surprised to perceive a tear upon his cheek. " Surprised," indeed, it may be said, for she never could have anticipated from him such a manifestation of the softer feelings of our nature. Hope, that ever rode triumphant upon the waves of all her troubles, inspired her with an emotion to avail herself of the golden moment, and, with her own sweet confidence in good intention, she

kissed his terrible face, an action then performed for the first time. The fetters of his stubborn nature now fell off, and with a voice betraying a deep-seated sorrow, he began :—

“ Never since I was a child, Caranza, and played at the feet of my mother, have I known till now real happiness, or the beauty of truth and sincerity. If I may judge by my present sensations, our natures were not originally very diverse ; but different indeed have been the courses pursued in our education ; and I fear mine has been vicious in every sense. Hitherto I have acknowledged nothing pleasurable but the sense of unrestrained power, nothing glorious but absolute dominion, and nothing beautiful but the unconditional subserviency of both body and mind, in those unhappy people over whom it was their misfortune that I should be placed. I believe I have committed many unjust actions—many cruel ones. Amid all my violence and injustice, however, you cannot lay to my charge the one of having, in a single instance, deceived you—I never told you a LIE. I take no merit to myself for this solitary virtue in my character, as regards yourself, for I was too proud to stoop to the act, knowing my power over you to be paramount ; neither have I considered it always a virtue, because I never perceived that my tutor was over scrupulous upon that point with others—with myself I believe he has been uniformly sincere ; for, indeed, he is acquainted with my nature, that it were ill for him to deceive me. I say, then, as I have never, amid all my injustice, insulted you with a lie, that it is my intention to amend your station for the future in my kingdom, and that my own conduct shall, if I can compass the attempt, undergo a reformation towards my people. I know you to be discerning, I have proved you to be steadfast, and unvaryingly kind and good ; you must, therefore, have perceived, from the first days of our union, that these points in your character commanded my respect and forbearance ; and well for us both that you possessed them.”

“ Kind Aborzuf !” said the delighted Caranza—(how little did she ever dream of being permitted to use such an epithet !)—“ you may judge of my feelings at this moment from the enviable state of your own. It were idle to deny that the latter months of my life have been most unhappy, and the more so because I had almost begun to fear that the last resource of the unguilty sufferer—HOPE—was dying within me. In any other frame of mind than that in which I so happily find you, the above complaint should never have passed these lips, but you are now worthy to hear such a confession, because you can better appreciate my heart, and because I would fain indulge a par-

donable self-love, in losing no opportunity of multiplying your respect for me ; that, indeed, I never would have forfeited—no unkindness, no oppression, should ever have induced me to swerve from the path which the unerring principle of loving-kindness informed me was correct. We are both conquerors ; but the higher glory is due to yourself ; for you have not merely had the courage to avow an error, but the desire to amend it.

“ You have signified your intention of amending my future condition in the ordering of your empire. I ask for, and wish no change, Aborzuf, but your full confidence in my honest purpose, and your consent to go hand in hand with me in promoting the comfort and prosperity of those subjected to your charge. Since the event of that fatal day, yet fatal only to misguidance and evil council”—here a flush of disapprobation crossed the cheek of the king—“ pardon me, Aborzuf, I speak not in a vain-glorious or triumphant spirit, but of congratulation. Since that day I have been ruler and guide of the people—paramount ruler in the best sense of the title, for I was unanimously elected by them” (Aborzuf started, and the quenching embers of his former spirit evidently began to rekindle) “but I accepted the trust for your advantage only ; had my purpose been dishonest, I could have abandoned you, in your helplessness, to the unrestrained resentment of the triumphant populace, and have either usurped your place, or, at least, have returned to my own happy people. But my motive for securing the absolute sway of government, during your indisposition, was, that I might remain wholly unshackled by the interference or dictation of that bad spirit under whose guidance it has been your ill fate hitherto to have been subjected. I know him, Aborzuf ; and so well does he know and fear me, because he trembles in the presence of the Being I serve and adore, that never since our union has he dared once to look me in the face ; and you must acknowledge that all the melancholy acts of your life have sprung from his suggestion ; and that, from the day of my entrance into this kingdom, not one of them has been proposed in my presence. You are conscious of his fearful influence, although you would gladly conceal it from your own heart ; but believe me, Aborzuf, your present noble resolution of amendment can never be carried into full effect without a sincere out-pouring of the heart before the Spirit of Beneficence, and the determined banishment of your former counsellor. He is the author of all your troubles—he is a demon ! The influence of blessedness is now upon us ; confirm your resolution by casting him forth.”

At this moment a swarthy vapour was perceived at the farther end of the room, and from the darkness came forth a graceful form, beautiful and winged, that was about to address the king ; when, as from a sudden consciousness of danger, Caranza seized his hand, and looking full at the vision, vehemently repeated her last words—" confirm your resolution : cast him forth !" " I do," replied Aborzuf, " and will hereafter dedicate my life to deeds of mercy." No sooner were the words uttered, than the form of the vision changed into one of monstrous shape and size, wherein were distinctly recognized the features of the demon-counsellor, yet distended and forced, as by venomous infusion, into frightful aggravation. With the bloated fury of disappointed lust he raged against his victim, making at the same time a motion to seize him in his clutches ; but on the instant, opposite to the princess and on the other hand of the king, was seen the sainted form of Sufieka, so like to her daughter that it seemed her very self *beautified*. With a calm look she waved back the shape, and said, "A higher power than thine, the author and dispenser of all benevolence wills that the self-corrector should undergo no other penance than the active prosecution of loving kindness and of all gentle deeds. Thy kingdom here is ended." Then, turning to Aborzuf, who sat as one entranced, she continued : " With reformed conduct, my son, shall come an answerable exterior : as thou hast returned to the innocence of thy childhood, thy form shall assume the consummate perfection of youthful promise." So saying, she shrouded him from view as in a clouded veil, when, with the passing of a thought, the loathsome incrustation of ugliness fell from him as a slough, and the angel presented to the bewildered and delighted Caranza a noble reward for all her filial piety, patience, and keen suffering, a reformed husband. Aborzuf was indeed reformed in every sense of the word ; so complete was the change in his person, that the lovely creature stood gazing upon him in imploring wonderment, not daring to believe the truth of her senses. She thought it all a delusion, till he, unconscious of his altered appearance, and unable to account for her behaviour, spoke to her. The sound of his voice, being the only thing she could recognize of his former self, and that, although sweet and manly, recalled so many bitter associations, that she fell and embraced his knees, weeping. He continued his appeal, soothing, animating, protesting in tones so honest and yet plaintive, that her heart unfolded as a flower to the sunbeam ; and, before the day had closed, the gentle creature found herself by turns upon his neck ; standing

before him, scrutinizing his features, with her hands upon each shoulder ; laughing, weeping, singing ; undertaking a thousand little domestic offices of kindness and attention, and leaving all unfinished to return and embrace the object of them. When, of his own accord, he kissed her lips, she felt that her heart was there too. Hitherto she had known the happiness of conscious rectitude and benevolence ; she now, for the first time, tasted the happiness of pure wedded love—that was her bridal night. Aborzuf's deportment was, as may be supposed, less demonstrative, less tumultuous than that of his inestimable partner ; it was not, however, in many respects, less enviable. If there be so great "joy in heaven over one sinner that repenteth," the joy of the sinner himself is a foretaste of that heaven. It is a joy to throw aside a burthen of sorrow ; and no sorrow can compare with the one arising from heavy self-conviction for injustice and unkindness. Of all sufferers bad men are the greatest objects of pity, for they have no city of refuge ; they have no consolation ; they have no "small still voice" whispering peace. Aborzuf's life had been one series of horrid errors arising from a diabolical education, of which he was brought to the knowledge by a few weeks of remorse and reflection, forced upon him by observing the sweet and cheerful constancy of that womanly heart which shone brightest in his adversity. He felt the folly of injustice, and he imbibed that "wisdom which is truly fair"—the wisdom of gentleness and forbearance.

Events like those which have been related could not have occurred unblazoned in a hovel ; in a palace they must infallibly be known, and quickly. The news of the king's metamorphosis, therefore, both in appearance and conduct, had become the subject of universal conversation and astonishment : very few, however, allowed themselves even to hope for such a fortune, and none believed it. Aborzuf himself confirmed the report ; for, with wise dignity, he adopted the only course to secure the respect and confidence of his people. He put forth a proclamation avowing the error of his former government, which he attributed to its just cause—that of having had a bad tutor and a bad minister, whom he had banished ; concluding with a determination to devote his best energies, for the future, towards promoting the happiness of his people, more especially of those families that had suffered by his misguided judgment.

Shortly after, a public festival was appointed, when Aborzuf, leading by her hand the author of his new-found peace of mind, came forward to preside at the solemnity, first presenting her to his people as their guardian angel, and the one to whom they were indebted for

all the wondrous and happy changes that had succeeded. His air and manner were, as may readily be supposed, embarrassed at first, for the alteration in his person produced so marked an effect upon the multitude, that he was forced upon the reflection of his former state of deformity. This made him, at times, grave and pensive, which his partner, with a woman's quickness, perceived, and always contrived to give a turn to his thoughts, by directing his attention to some groups of happy faces, or by some speech of tenderness and merriment.

Little remains to be told of the history of Caranza and Aborzuf. Shortly after the event just described, news was brought of the death of Azum Beg ; upon which, the young queen, knowing how highly she stood in the affections of her own people, accompanied by her consort, instantly set off for her father's court, and so politicly did she dispose all arrangements, that she and Aborzuf were unanimously elected joint successors to the vacant throne of her father. One half of the year, therefore, was passed by them at each capital ; and both nations were blessed, for many years, with the prosperity resulting from wise and mild governance.

Thus they lived happily, and communicating happiness ; and after her death, the memory of Caranza survived for many ages under the emblem of a favourite flower, similar to our everlasting pea, to which they gave her name, on account of a peculiar property it possessed of flourishing and blooming most sweetly when most crushed by obstacles or ugly weeds.

Women ! I am proud to say, that there are among you many unchronicled Caranzas.

PROCEEDINGS OF METROPOLITAN SOCIETIES.

ZOOLOGICAL SOCIETY.

JUNE 26th.—A live specimen of the Peregrine Falcon was exhibited, which had been captured, about three hundred miles from land, on the Atlantic. Mr. Blyth then produced a new arrangement of the class of birds, which occupied the attention of the meeting for the remainder of the evening. After discussing at some length the relative value of different characters, considered as bases of classification, or indicia of the true physiological relations of organisms, and drawing a wide distinction betwixt the fundamental characters, and those secondary and comparatively superficial modifications which are merely especial adaptations to locality or the mode of procuring sustenance, Mr. Blyth proceeded to indicate the following as distinct orders, together with a few peculiar genera which could not be legitimately admitted into any of them :—

1. *Scansores* (Climbers) : composed of the Parrots exclusively.
 2. *Raptores* (Preyers) : corresponding to the *Accipitres* of Cuvier.
 3. *Streptiles* (Screechers) : or those *Insessores* of Vigors which have a simple vocal apparatus.
 4. *Cantores* (Warblers or Songsters) : consisting of the remainder of the *Insessores* of the quinary classification.
 5. *Gemitores* (Cooers) : or the Pigeons.
 6. *Rasores* (Scratchers) : or the Poultry group.
- Hereabouts, it was stated, should range the singular and anomalous genus *Opisthocomus*, and probably the *Mesites* of De Blainville.
7. *Cursores* (Runners) : or the genera destitute of a sternal process, the *Oiseaux anormaux* of L'Herminier and other French naturalists.
 8. *Calcatores* (Stampers ; ground-patters) : or the Bustards, Plovers, and Snipes ; also the Sheathbill, the Courlan, and some other remarkable genera which accord in their anatomical conformation.
 9. *Gradatores* (Stalkers) : or the Cranes, the Storks, and Herons, and perhaps the Trumpeter and the Cariama.
 10. *Latitores* (Skulkers) : or the Rails and Gallinules.
 11. *Natatores* (Swimmers) : restricted to the *Lamellirostres* of Cuvier, with the addition of the Flamingoes.
 12. *Mergitores* (Immergers) : or the Loons and Grebes.
 13. *Piscatores* (Fishers) : or the *Tolipalmati* of Cuvier.
 14. *Vagatores* (Wanderers) : or the Gulls and Petrels.
 15. *Urinatores* (Divers) : or the Auks and Penguins.
- Should it be desired to collate these numerous ordinal divisions into higher groups, it was suggested that the successive modifications

of the foot for perching, for ground habits, and for swimming, afforded available characters; whence the terms *Insessipedes*, *Telluripedes*, and *Natantipedes*, were accordingly proposed; though it was remarked that these more general grand divisions were of little practical value, and their limits could only be arbitrarily assigned.

Proceeding next to treat of his several orders more in detail, the author first enumerated the many peculiar characters of the *Scansores*, or Parrots, and stated his reasons for placing them at the head of the system, preceding the *Raptores*, as among *Mammalia* (by general consent) the *Quadrumana* do the *Carnivora*. He knew of no character, beyond the reversed outer toe, wherein the Parrots resembled the other *Zygodactyli* of Temminck and others, from all which they differ most essentially in the conformation of the skeleton, of the digestive organs, the organ of voice, and even of the foot itself, on which the division *Zygodactyli* of other systematists solely rested. Their brain is more highly organized than in any other birds, whereas that of the other yoke-footed tribes was stated to be remarkably low; and some additional characters, presenting a curious analogy with the *Quadrumana*, were likewise indicated. The utter distinctness of the Parrots, also, from all other birds, the absence of even a tendency or approach to a gradation or transit into any other group, furnished occasion for some remarks on the popular theory, which contends for the existence of intermediate forms connecting every group together by a series of links; a theory which, it was asserted, could never be maintained by those who have investigated the anatomical structure of the various orders of birds, as laid down in the communication then before the society.

The *Raptores*, or birds of prey, required little definition, as so obvious a group had already met with general acceptance. It would be sufficient, therefore to call attention to one fact, of which few naturalists seemed to be aware or adequately appreciated. The genera *Falco* and *Vultur* of Linnæus, on the one hand, and *Strix* on the other, present strongly-marked and invariable distinctions, both in the conformation of the skeleton and digestive organs, which distinctions, it was affirmed, are as forcibly maintained in the most hawk-like Owls and the most owl-like Hawks, as in those which have been deemed the types of their respective families: conformably with which distinctive difference, in kind rather than in degree, Mr. Blyth proposed to arrange the *Raptores* into two tribes, which he designated, for uniformity of termination with other equivalent groups, *Rectirostres* and *Intectirostres*.

The *Streptopores* were treated of in considerable detail, and resolved into three primary groups, and many subordinate ones, as shewn in the annexed tabular representation.

STREPTITORES.	Syndactyli	Buceroides	Appendirostres	Bucerida—Hornbills
			Arculirostres	Upupida—Hoopoes
		Halcyoides	Cylindrirostris	Meropida—Bee-eaters
				Coracida—Rollers
				Halcyonida—Kingfishers
				Todida—Todies
	Zygodactyli	Picoides	Angulirostres	Galbulida—Jacamars
			Serratirostris	Prionitida—Motmots
			Levirostris	Rhamphastida—Toucans
				Musophagida—Touracos
		Cuculoides	Cuneirostres	Bucconida—Barbets
				Picida—Woodpeckers
Heterodactyli		Trogonoides	Cuculirostres	Cuculida—Cuckoos
				Tamatiada—Puff birds
		Cypseloides	Accurvirostris	Trogonida—Trogons
			Parvirostris	Caprimulgida—Moth-hunters
			Tenuirostres	Cypselida—Swifts
				Trochilida—Humming birds

All of which numerous divisions were successively descanted on, more particularly as regards their anatomical characters of agreement and difference.

The *Cantores* were more summarily disposed of; the author expressing an intention to treat on the sub-division of this order in a special memoir. It differs remarkably from the preceding group of *Streptitores*, in being as difficult to sub-divide as that order was to bring together in large groups; for, though containing, perhaps, triple the number of species, at the lowest rough estimate, the resemblance, in all the essential details of structure, was stated to be so exceedingly close throughout, that divisions of analogous value to those distinguished by names bearing the termination *rostris* could scarcely be instituted. After describing several constant and invariable characters peculiar to this strongly-marked, vast order, and offering a few general concluding remarks, postponed the consideration of the remaining portion of his *Systema Avium* for a future occasion.

A discussion ensued, in which satisfaction was expressed that the internal conformation of birds, which had hitherto been much neglected by the generality of systematists, had, in this instance, received its due share of investigation.

JULY 10th.—A fine mounted specimen of the Burrhal Sheep was exhibited, the skin of which had been forwarded to the Society by J. E. Bicheno, Esq. This animal was killed at an altitude of 1700 feet on the Himalayas, near the Berinda Pass, communicating with Chinese Tartary: it is a species of most excessively wary disposition, so much so, that, in the notice accompanying the specimen, it was stated that no previous example of it had been obtained by Europeans; and the individual sent was killed by a rifle bullet at a distance of 300 yards. Mr. Ogilby, however, observed that a specimen, unique until that time, existed in the museum of the Linnæan Society; and stated his conviction that another species of Mufflon, with enormous horns, inhabited the same colossal range of moun-

tains, although Mr. Hodgson, who formerly held a similar opinion, had since resolved what he described as two Himalayan species of *Ovis* into one. Dr. Canter then read an interesting communication on the Marine Serpents of India, a group of animals which had hitherto received but slight attention on the part of naturalists, in consequence, perhaps, of the danger which attended the study of them in the living state, together with their geographical distribution, which is confined to the tropical seas. They were stated to be very numerous around the delta of the Ganges, where they are commonly taken in the fishermen's nets. Their anatomy, with the modifications it presented in reference to aquatic habits, was then given in detail. All of them were described to be, without exception, highly venomous; a fact denied by Schlegel, who asserted that they are all harmless, which erroneous opinion is even very current in India. The fact, however, was lamentably proved by the recent death of a British naval officer from the bite of one of these reptiles, and various experiments instituted by Dr. Canter on different animals with their venom, shewed it to be exceedingly virulent. They prey chiefly upon fishes.

JULY 24th.—A stuffed specimen of a common fowl was exhibited, which had been sent from India, and on the comb of which had been engrafted the spur of one of its legs, the corneous portion of which had grown to a considerable length, in consequence of being placed nearer to the centre of circulation. Mr. Owen remarked upon the fact as possessing much interest in a physiological point of view, and stated that John Hunter had succeeded in similarly engrafting a human tooth upon the comb of a fowl, the theory of the attachment of which he took occasion to explain. Mr. Martin then described and named several new species of ophidian reptiles, which he severally designated *Coluber canteri*, a species from India, *Herpetodryas panctifer*, from Antigua, and *Vipera euphratica*, *Columaria? fasciata*, *Psammophus pulcher*, *Calamaria modesta*, and *Natrix inornata*, brought home by the conductors of the Euphrates Expedition.

AUG. 14.—The Rev. Dr. Bachman, of Philadelphia, exhibited an extensive assortment of North American Squirrels, of which he distinguished fifteen species, several of them further presenting a number of local varieties. The first, the well-known *Sciurus capistratus*, was stated to be extremely variable, a fact illustrated by a series of specimens; and it appeared that three distinct species had hitherto been confounded under the *S. cinereus* of systematists, for two of which were proposed the appellations *leucotis* and *carolinensis*. There were also three black species, distinguished by the names, *niger*, *audubonii*, *fuliginosus*; and the remainder consisted of the *S. nigrescens* of Bennet, *S. macrourus*, *californicus*, *subauratus* (described for the first time), *collei* (a notice of which would appear in the forthcoming account of Captain Beechey's voyage), *hudsonicus*, *laniginosus*, and *richardsonii*, the two last of which were also new. The general characters and habits of these ani

mals were severally treated of, which latter differed in some instances remarkably in species that were nearly allied ; and the rev. doctor succeeded in elucidating what had hitherto been involved in much perplexity, the specific distinctions of an extensive group of animals, which could only have been successfully investigated in their native forests.—Professor Owen then concluded his notice of the anatomy of the Apteryx, by describing its osteology, the characters of which at once decided its relationship to the other struthious birds. Not any of the bones were permeated by air ; and the sternum presented two posterior emarginations, and also two foramina, the position of which was peculiar, being above and scarcely to the interior of the emarginations.—A living specimen of the *Gymnotus electricus*, from the river Amazon, was next exhibited by its possessor, Mr. Porter ; and most of the members present had the curiosity to endure the shock given by this animal, the intensity of which depended on the mode of handling or the excitement of the fish : its power had considerably diminished with decline of temperature, and was developed to the greatest extent in tepid water. Mr. Waterhouse then displayed a number of quadruped skins, procured in Van Dieman's Land, all of which were recognized ; but the locality proved to be in some instances interesting, and in others was then ascertained for the first time.

SEPTEMBER 11th.—A beautiful small Antelope, allied to *Antelope pygmaea*, and obtained from eastern Africa, was first exhibited by Mr. Prince, on the part of Mr. Ogilby, who signified the intention of that gentleman to describe it on a future occasion, and bestow on it a specific name ; the present course being adopted in consequence of the specimen having to be sent into the country. Col. Sykes then displayed to the meeting the skins of two interesting mammalia unknown in the collections of this country ; first, that of the *Canis jubata*, a large and singularly beautiful animal, with a considerable mane, and which he conceived would prove to be the South American analogue of the Hyenas of the Old World ; the second, that of the *Felis pardina* of Temminck, a handsome European Lynx from the Pyrenees, marked with elongated black spots or broken lines on a yellowish-grey ground-colour. He then made some remarks on the Thickbilled or Calandra Lark of Southern Europe, which he had recently enjoyed opportunities of observing in the vicinity of Cadiz, and greatly extolled its merits as a songster ; he conceived this bird to be worthy of generic separation from the species of this country. Mr. Blyth next called attention to some specimens of the Common Crossbill which he had recently procured, and which tended to show that neither the red nor saffron-tinted garb of the males was indicative of any particular age, as commonly asserted. The general opinion was, that on casting its nestling plumage the male Crossbill always acquired the red colour, and the saffron-tinted dress at the second moult, and ever afterwards ; the young once moulted exhibiting a brighter garb than older individuals. Mr. Blyth stated that this was by no means the case, for he

had known red individuals to acquire again the same colour, much brighter than before; he had also known them to moult from red to saffron, as stated in books; and now he exhibited two young males recently shot from a flock, both of which were exchanging their striated nestling plumage for saffron feathers, the change in one of them being nearly completed. He had also seen specimens, the new plumage of which was partly red and partly yellow; so that there was no regularity whatever respecting these colours. The same variation, he added, was also observable in the genus *Corythus*, less frequently in *Erythrurhiza*, and occasionally in *Linota*, and he exhibited a specimen of the Common Linnet shot during the height of the breeding season, when the crown and breast of this species are ordinarily bright crimson, which had these parts of the same saffron hue so common in the Crossbills. He concluded by observing, as a fact not generally known, that fertile females of the genus *Linota* not very unfrequently assumed a red crown and breast as in the male, a circumstance apt to escape observation, as such specimens are liable to be considered as of the opposite sex without further examination.

BOTANICAL SOCIETY.

SEPTEMBER 7th.—A donation of British and foreign plants, presented by the Botanical Society of Edinburgh, was announced by the Secretary, together with another donation of 5,500 specimens, including 420 species of British plants, from the collection of D. Cooper, Esq. the Curator of the Society, who exhibited some examples of *Polygogon littoralis* from near Woolwich. A paper from the Curator was then read "On a new principle of making fences, formed according to the laws of vegetable physiology," a plan first adopted by Mr. Breeze, of the Nursery, Brentwood, Essex, on the estate of Sir Thomas Neaves, Daynam Park, in that vicinity. It is, in fact, a natural living fence, and consists simply of growing and planting, for the purpose, trees or shoots of the same or allied species, and uniting them by means of the process of *grafting by approach*, or *inarching*. A fence formed on this principle possesses many advantages over the fence-work ordinarily employed, never requiring to be repaired, on account of living wood resisting the action of the wind and weather. It acquires strength every year by the deposition of new layers of wood, is much cheaper in first cost than the common fence or paling, &c. Mr. Cooper also noticed the variety of *Polygonum aviculare*, called by Hudson *P. maritimum*, as being very plentiful a few weeks since in Kent and Essex, and considered that it fully merited a place in the recent floras of this country.

CRITICAL NOTICES OF NEW PUBLICATIONS.

Astronomy Simplified ; or, Distant Glimpses of the Celestial Bodies, described in familiar language, setting forth the Power and Goodness of the Creator through Astronomical Facts, by Frances Barbara Burton ; 8vo, London, 1838, pp. 138.

MISS BURTON'S object in composing this extraordinary group of planetary sketches, is, to exhibit such a compendious series in the celestial machinery, every where surrounding the earth, as may gradually unfold its magnificence to the inquiring mind ; and thus, to place a popular view of astronomical knowledge within reach of the intelligent of all classes, "feeling as she does, daily more and more, the heart-reviving joy attending the contemplation of the Creator's works."

These "distant glimpses" themselves form a beautiful and most condensed analysis of the facts which establish the inductions of Astronomy ; and, consequently, they stand high above any attempt at exhibiting their spirit and importance in a better or greater state of analytical concentration. Suffice it, then, to state our admiration of the experience and judgment displayed by Miss Burton, in the arrangement of her subjects, and in the dignified simplicity with which she popularizes her descriptions of the firmamental systems, and their stupendous magnificence. At the same time, and for the purpose of enabling our readers to devise an estimate of Miss B.'s aim and the extent of its accomplishment, we furnish them with two extracts, in which the exquisite didactic powers of this authoress appear in harmony with a fine aptitude to moral reflection.

Our first extract is taken from Miss Burton's "glimpse" of the planet we inhabit ; and, at page 34, we find her teaching that "the earth is demonstrated not to attain her perihelion point, by the annual retrogradation of one minute and two seconds of the ecliptic. Consequently her arrival at the perihelion point is found to retrograde in the proportion of 1 degree 48 seconds in a century, of a whole constellation in 1744 years, of a quarter of the ecliptic in 5,232 years, of half of it in 10,450 years, and of the entire circumference of the ecliptic in 20,931 years. From this systematical retardation in the Earth's arrival at her perihelion point, it therefore follows that 10,450 years hence it will be the 23rd degree from the equator of our present northern hemisphere, which shall pass beneath the vertical beams of that era's perihelion point. Then shall our present northern hemisphere (at that far distant period, the southern one of this planet) then shall it exhibit the phenomena now displaying in the

present southern one; phenomena immutably appertaining to the position, not construction, of the planet's southern hemisphere.

"In illustration of this impressive subject, we will remark that, through the same revolutionary precision, the identical 23rd degree of our present northern hemisphere, as above delineated, actually passed beneath the perihelion beams that vivified the Earth's planet 10,450 years back! And, moreover, with regard to the present southern hemisphere, that the same 23rd southern degree, annually reflecting the perihelion rays of the present age, actually received them 20,931 years ago! and, guided by a like unalterable precision, 20,931 years hence shall again pass beneath their unerring irradiation! The Almighty dispenser of all things ordaining the invariable embosomment of one half this planet, alternately, within the fertilization of a southern hemisphere; no doubt infinitely more regenerative than would be a northern one. Provisional care we thus every where find pervading celestial machinery, even in its minutest details! In every 20,931 years, therefore, the same periodic phenomena are repeated, from recurrence of the same causes! Behold here stupendous cycles of progressive changes! astounding in result, imperceptible in operation. Each gradation occupying 5,232 years, their opposite effects 10,450 years, and the entire accomplishment of their phenomena, twenty thousand nine hundred and thirty-one!

"It is calculated that the present state of earthly phenomena shall generally continue until the passage beneath the perihelion point of the $17\frac{1}{2}$ degree of southern declination; that is, during the period that the Earth's celestial crossing point retrogradeth along four complete signs, or during 6,977 years, whereof 4,670 years have expired. No considerable hemispheric changes from this perihelion revolution are consequently to be expected until about the year 4,719 of our christian era, when they will become very apparent. Referring to the past, the last grand hemispheric change is calculated to have taken place 5,814 years ago, or 4,002 years before the christian era; the very date of the Mosaic account of the creation, and exhibiting, in all probability, visible phenomena such as are described in the first chapter of Genesis. In due progression of time the middle southern degree passed beneath the perihelion rays about the year of the world 2258, producing probably such effect in that hemisphere as may be imagined from the Mosaic and other accounts of the deluge then taking place. Referring to the future, the next time the Earth's equator passes beneath the perihelion point it will be from south to north, in the year of the christian era 6,463, or 4,651 years hence; a period so remote that, without physical change, the very name of Britain will be forgotten! In the year 8,207 of our christian era, the Earth's (present) middle northern degree of declination will pass beneath the vertical perihelion rays, producing very visible effects on this, our actual northern hemisphere. Between that period and the year 15,184, this present northern—then the southern—hemisphere, with all its superb machinery of kingdoms, empires, and republics, will probably

be as completely covered with sea as is at present the actual one : that present southern hemisphere, which to the human race of that period shall have become the northern hemisphere of this planet. Thus, through the magnificent revolution attending the Earth's perihelion point, the Creator has ordained the gradual alternate regeneration of her two hemispheres, thereby maintaining, through 21,000 years after another, that vital principle of planetary reproductiveness constituting, throughout infinitude, the stamp of Omnipotence. And thus, by an unheeded, but unremitting operation, are the present fathomless abysses of ocean fructifying into the luxuriant valleys of far distant future ages, and its trackless deserts, into the majestic continents and fertile islands, of remote generations ; destined sites of the splendid states and empires, irradiating the next hemispheric mutation. Hence the durability of this globe, as a planet. Hence, throughout cycles, incalculable by man, may the Earth hold on her course of fulness and gladness, in ceaseless harmony with the countless other glorious worlds of an Omniscient Creator."

Miss Burton represents NEBULÆ as groups or shoals, of divers forms and sizes, occupying regions of space so infinitely remote as not to be discernible, except through telescopes of very superior power, and then they appear in the fashion of light clouds or vapours ; but many of them, when examined through the very strongest magnifiers hitherto known, exhibit one or two, or sometimes three, luminous bodies, apparently appertaining to such light clouds or vapours. The most important *Nebula* to human apprehension, she says, is the *Milky Way*, which comprises a multitude of these nebulous forms ; and, after descanting on the multiplicity, diversity, and vastness of these wonderful bodies, she proceeds to delineate a classification of them, and concludes with an animated sketch on the "Regions of Nebulosity." From this we draw our second extract :—

"When we contemplate the regions of nebulosity among the multiplicity of objects either too vast or too minute for unassisted human perception, not the least wonderful are the particles of which they are composed. Although excessive rarity, or minuteness, places the component particles of nebulosity beyond any term efficiently expressive of smallness, yet each of them possesses a determinate bulk, and is allied, by definite angular construction, to a specific class. The countless varieties, both in form and substance, of these particles, exhibit a diversity in creative operation amounting to infinite ; while the harmonious uniformity of its designs is equally apparent from the fact that, how much soever different species of nebulous particles vary in other particulars, yet all correspond in possessing affinity towards their own specific class. The classification of each particle may, therefore, be held as determined by its specific angular construction, and its rotatory action, by the modification either of the electric or magnetic effluvia, to which the polarity of that construction bears affinity. Here it may not be inappropriate to remark that the magnetic principle seems an agent more powerful in action, and wider in scope,

than the electric. The magnetic fluid appears constantly flowing along the Earth, and from the Earth towards the sun, in like oscillatory rotation, attending all the operations of nature ; and the electric fluid appears correspondingly flowing from the Sun towards the Earth, and from the Earth towards the Sun, in like oscillatory rotation, either at direct or oblique angles, to the course of the magnetic fluid ; that is, at angular directions towards it, of every magnitude, as determined by the position of the Earth towards the Sun, at any given moment. Hence the electric effluvia may be considered a grand operative medium of the Sun amongst the planets of his system ; and the magnetic effluvia, an important portion of the all-pervading principle every where generated, and diffused in universal oscillatory rotation ; but whose action upon the Earth's planet is determined by the influence of her two polar stars. Every planet, therefore, throughout every system, while propelled and upheld through the electric agency of its particular sun, may be presumed as connected with, or rather as intertwined amongst, the almighty mechanism of the universe, through the magnetic instrumentality of its polar stars. We, therefore, perceive that celestial bodies, so far from wandering in space unconnected or unsustained, are knit together, at every infinitesimal angle, by intersectional gaseous mediums, forming a mechanism more consolidated in construction, and precise in evolution, than can enter the imagination of mere human artificers. As in these instances minuteness of operation precludes unassisted human perception, so if we advert to an aggregate mass of nebulous particles, efficient to the development of a body of Jupiter's bulk—a body exceeding 90,000 miles in diameter—we shall find ourselves equally lost amidst immensity ! But if, for an instant, we expand our faculties towards the consideration that every component particle of this enormous bulk possesses its appropriate affinity towards some definitively propelling modification or other, either of electric or magnetic polarity (according to the specific angular construction of each particle), we shall cease wondering at the rapidity of orbicular rotation maintained by bodies of like magnitude. If it be asked, whence originated the actual distribution of nebulous matter into suns, and their revolving planets—that is, what primeval organization developed this diversified universe of worlds—the question, as yet, is only answerable by conjectures. Some supposing the respective sun of each system, as primarily created—and whence their revolving planets were subsequently projected—some supposing the small globe of the earth first to have started into existence, and the sun afterwards, as an appendage—with various other hypotheses, some plausible to mundane blindness, but all, perhaps, equally fallacious, the subject, probably, lying beyond the present scale of man's perceptions. It was but yesterday that, as a race, optics demonstrated to him the universality of the vital principle alike invigorating the microscopic inhabitants of a drop of water and the telescopic wonders of nebula. Nature's volume is only unclasped before him ; can the first page unravel its mysteries ?

“ The more we expand our ideas relative to the grandeur of creative operation, and its consequent universality, both as to extent and duration, the less we shall degrade it. It appears, therefore, more consonant both to recent discoveries in regions of nebulosity and to the all-pervading nature of Omnipotence, to presume that, so far from any single planet having been formed before all others, or even any single sun having been primarily irradiated, the organization of celestial bodies may have been effected by the universality of that rotatory energy constituting their sustaining agency. In accordance with the universality of this principle, myriad affluents may rationally be supposed, rotatorily exhaling, in every direction, from regions of nebulosity into infinitesimals, which may equally be presumed rotatorily aggregating, in their turn, into diversified classes of nebulous particles, the multitude of the classes corresponding with the polaric activity inherent in their combinations; the reorganization produced thereby concurring with the general laws of the universe, which every where appear acting by the rotatory disorganization and reorganization of constituent parts. Here we must observe that, however impalpable to unassisted human perception a single nebulous particle may appear, yet that the disorganization and consequent elective recombination of various proportions of affluvial properties, are necessary to the formation of one such nebulous particle; since, such is the complexity, as well as the minuteness of these very infinitesimals, that the properties of each single one, may be analyzed into proportions as essentially diversified among themselves, as may be the component parts of one of our elixirs. The intensity with which this complexity must be amalgamated, forms another striking feature in the agency of these infinitesimals; and probably the equipoise between the primeval tenacity of organic amalgamation, and the activity of polaric affinities, forms a keystone to most of nature's phenomena. Again let us repeat it, nature's laws ever act analogously; and the more elaborate the condensation of the creative and regenerative properties within those infinitesimals, the more stupendous must be the reaction of their development. The intensity, therefore, of this amalgamation—an intensity amounting to infinite, and apparently marked with the spiral delineation of all nature's organizations—this intensity of amalgamation may be assumed of vital instrumentality in the diffusion of solar and planetary rotatory influences, whether that diffusion be of a creative, an upholding, or a regenerative nature. Infinity of minuteness lies as far beyond comprehension as infinity of greatness; but our conceptions must aim at conforming themselves, in some degree, to the marvels of both, in treating of the regions of nebulosity—those emporiums of nature's alchemy, those focusses of her operations—every where scattered round, as they are, with her accustomed profusion; emporiums whence issue the creative, the sustaining, the regenerative affluxes, in combinations so minute, so intricate, that eternity only might suffice for developing the wonders of a single atom! These, and such as these, form our present contemplations. Labora-

tories of grandeur, unfathomable even by thought ; and effluvia veiling themselves from computation through infinity of rarefaction.

“ Human faculties gladly shelter themselves, after such contemplations, within objects of comparative familiarity ; these they find in nebulous particles. A universe of affluxes would elude unassisted human perception ; but the gradual combination of a detached portion into nebulous particles, through rotatory and polaric action, brings that portion palpably before the senses. We may, therefore, rationally presume these affluvia, thus primevally exhaled from the regions of nebulosity, to have aggregated, during a sequence of many ages, into infinitesimals of numberless diversified polarities and affinities ; and may equally assume the aggregation of such infinitesimals into nebulous particles to have taken place, through like rotatory and polaric action, in the course of periods of commensurate immensity, the very homogeneousness of the original materials displaying the harmoniousness of creative design, as developed in the sequel of farther myriads of ages. Here conjecture seems terminated. The observation of nearly a century, with highly-wrought glasses, offers the conclusion that each particle throughout every nebula, from impulses analogous to the foregoing—that is, by like rotatory action, and from like decomposing and recomposing polaric affinities—that each particle classes itself amidst those of relative rarity and polarity, although on a scale of proportionate grandeur. For here we must remember that it is a nebula we are now contemplating, an awfully stupendous nebula ; wherein the denser particles are aggregating, not into fresh atoms, but into august centres, or suns of future systems ; and wherein the particles of more rarefied tenuity, or external position, are systematically classing themselves into globes proportional to their respective species or polarities, until assemblages of orbs present themselves of the diversified magnitudes and aspects of those composing our solar system. Nor is this all, since, in process of time—that is, in the course of myriad ages—the nebulosity of one entire nebula concentrates into the illumination of its own multitudinous clusters of suns, each sun, throughout his own cluster, having become progressively encircled by his own express system of planets, with their moons, and a cometary machinery crowning the whole. The inherent, all-propelling rotatory principle appertaining to each particle of every individual globe, analogously developing itself, not merely in propelling action towards each distinct planet, but towards those very suns themselves. Every sun, throughout each cluster, himself rotatorily propelled and rotatorily propelling others, thus splendidly illustrating the analogy between the revolutions of his own dependent planets around his own immediate orb, and those on the more magnificent scale, whereby his own effulgent self, and the other suns of his cluster, revolve around that cluster's common centre. Finally, this primordial principle, crowning itself with the majesty of infinitude, as the countless cluster of suns pervading space, marshalled within their appropriate strata of

sun, revolve around the centre of the universe during cycles, the myriads of whose enumeration outstretches calculation. But whence originated this mysterious agency, whence generated, what is the essence of the rotatory universality, may not be for human apprehension. Every where its vitality is felt, is beheld ; even in our minutest organic functions, even amidst the decompositions of death : but its nature lies impervious to sense. Man can speak only of its mechanical processes. None can impel, none can elude, none can restrain it ; and every where surrounding, and actuating, and sustaining, it bears the stamp of Omniscience, which shrouds creative might from mortal investigation. The researches of science have thus opened the sublimest of all subjects to human contemplation—namely, a series of solar systems unceasingly propelling, by the divine energy, from the original matter of physical nature. Astronomical observations will henceforward be directed, with reference to the laws of creation itself, towards some of the facts actually in progressive operation, amidst the regions of nebulosity ; and the resplendent beneficence of the Creator will be more and more manifested, as the universality of his operations becomes more and more developed. Some thousands of years hence, the expansion of science may hazard calculations on the consolidation of a starry stratum, on premises as precise as are those now employed on the growth of a cedar tree, both equally the workmanship and under the superintendence of the same power ; since the development of a petal or of a planet is alike dependent upon and demonstrative of omnipotence. We have here approached boundaries impervious to the ignorance of former ages, and at the infinity of whose remoteness from our solar system man's faculties stand appalled ; yet so far from being those of limitation, demonstrated by the increasing excellence of magnifiers, as leading still onwards and onwards, amidst fresh regions of infinitude, and fresh displays of creative vitality. Displays, not merely of sun upon sun, in stupendous rivalry, but embracing regions the smallest conception of whose immensity demands the entire abstraction of human intellect. Regions wherein the immutability of God reveals itself in an eternity of primordial diffusion ; wherein the faintest object discernible by man comprises strata of suns, and the minutest operation the formation of worlds !”

OUTLINES OF PERIODICAL LITERATURE,

RELATING TO THE NATURAL SCIENCES AND PHILOSOPHY.

(Continued from Vol. viii. p. 349, of this Journal).

Annals of Natural History ; or Magazine of Zoology, Botany, and Geology ; conducted by Sir W. Jardine, Bart. P. J. Selby, Esq. Dr. Johnston, Sir W. J. Hooker, and Richard Taylor, F.L.S. 8vo, London, 1838, with graphic illustrations.

V.—First in this number, stands an article of Professor Henslow's, intitled *Florula Keelingensis*, or an account of the native plants of the Keeling Islands. In this list the natural system of arrangement is preferred, and twenty-one species of vegetables are succinctly described. These are, *Parlatium siliaceum*, *Triumfetta procumbens*, *Pemphis acidula*, *Portulaca oleracea*, *Guilandina bonduc*, *Acacia farnesiana*, *Urera guadichandiana*, *Achyranthes argentea*, *Boerhavia diffusa*, *Scaevola Koenigii*, *Guettarda speciosa*, *Cordia orientalis*, *Tournefortia argentea*, *Dicliptera buarmani*, *Ochrosia parviflora*, *Panicum sanguinale*, *Stenotaphrum lepturoide*, *Lepturus repens*, *Cocos nucifera*, *Hypnum rufescens*, and *Polyporus lucidus*, forming altogether an interesting set of plants, whose seeds must be provided, in a very eminent degree, with the means of resisting the influence of sea-water. 2. Fishes new to Ireland, to the number of six, are zoologically delineated by Mr. Thompson : these are, *Trigla blochii*, the red gurnard ; *Mugil chelo*, the thick-lipped gray mullet ; *Gobius gracilis*, the slender goby ; *Salmo eriar*, the bull-trout ; *Gadus callarias*, the dorse ; and *G. minutus*, the poor. As an ichthyological communication, this of Mr. T.'s is important and acceptable. 3. Dr. Walker Arnott considers the Linnæan genus *Rhizophora* as a group of the order *Rhizophoræ* ; and, as such, he makes it the subject of a clear and ample definition. He then gives a synoptical view of the genera and species of the whole group, with their phytographical distinctions : thus, *Rhizophora mangle*, *R. mucronata*, and *R. conjugata* ; *Ceriops candoliana*, & *C. roxburghiana* ; *Kandelia rheedii* ; *Bruguiera gymnorrhiza*, *B. cylindrica*, *B. rheedii*, *B. australis*, *B. eriopetala*, *B. cariophylloides*, *B. malabarica*, *B. parviflora*, and *B. xerangula*. Dr. Arnott subjoins an admirable *Clavis Analytica* of the better known species of this group of vegetables ; he then adds descriptive remarks on the *Carallia ceylanica*, *C. corymbosa*, *C. sinensis*, and *C. integerrima* ; and finally, for definite considerations, he proposes the establishment of a new genus, the *Dryptopetalum coriaceum*, which he characterizes. This valuable contribution evinces the doctor's intimate acquaintance with the niceties of botanical literature and philosophy. 4 Mr. C. C. Babington produces farther reasons in support of his observations on the *Habenaria bifolia* and *H. chlorantha*, originally published in the Linnæan Transactions ; and he repeats their characteristic differences, for the sake of those botanists who do not see

that expensive work. 5. The specimen of the Botany of the Islands of New Zealand is continued by Mr. Allan Cunningham; and, in this contribution, he describes *Euphorbia glauca*: *Mida salicifolia*, *M. eucalyptoides*, and *M. myrtifolia*; *Pimelea guidia*, *P. pibosa*, *P. virgata*, *P. prostrata*, *P. arenaria*, and *P. urvilliana*; *Persoonia tora*; *Knightia excelsa*; *Laurus tarairi*, *L. tawa*, and *L. calicaris*; *Laurelia nova seelandia*, of which remarkable plant, the tree bearing the female fructification has not been discovered in its native country. 6. Farther descriptions of British *Chalcidites* are given by Mr. Walker; as the *Cirrospilus lyncus*, with eight varieties; *C. crino*, with one variety, *C. pacuins*, with one variety; *C. singa*, *C. phorbas*, *C. arsarnes*, *C. minaus*, *C. abron*, with four varieties; *C. isma*, with eight varieties; and *C. medidas*, with ten varieties, all of which, and most of the others, are female. 7. Mr. J. E. Gray's catalogue of the slender-tongued Saurians, in an additional article, includes six families: *Lonurida*, *Circosaurida*, *Chirocolide*, *Chamesaurida*, *Helodermida*, and *Monitorida*, wherein several new genera and species are methodically distinguished. 8. As an illustration of Indian Botany, Drs. Wight and Arnot describe the *Solanum giganteum* phytologically, and exhibit its calyx, pistil, corolla, and berries, on a plate, with three distinct figures. 9. Mr. Gould's observations on the raptorial order of Birds from Australia, stand for a "Proceeding" of the Zoological Society: they constitute an original, perspicuous, and important contribution to the ornithological philosophy. 10. At the Botanical Society of Edinburgh, Dr. Graham read observations on Plants collected in Scotland, in 1837, among which were *Arenaria norvegica*, *Cerastium latifolium*, *Lychnis divica*, *Agrostis canina*, *Fedia mixta*, *Erythraea littoralis*, *Lathyrus maritimus*, with the habitats of each subjoined. An account of the most celebrated gardens of antiquity was submitted to the society by Mr. Falconer, with observations on the hortulan taste they exhibit. In a paper, by Mr. Macauley, his aim was to prove that Flowers were esteemed by the ancients as objects of taste, and cultivated as a source of amusement. And a communication from Col. Brown, contained a sketch of the Botany of the neighbourhood of the Lake of Thun, in Switzerland, chiefly in reference to the geographical distribution and altitude of the plants, specifically enumerated. 11. A communication from Col. Sykes was read at the Royal Asiatic Society, on the vegetable and other productions of the Deccan; and the paper was accompanied with an extensive herbarium and a great variety of specimens: the essayist had in view, to show the immense extent and importance of the natural resources, in the eastern continent and adjacent peninsula, which yet remained to be made subservient to the arts and manufactures of this country. 12. On the anniversary of the "Immortal Swede's" birth-day, notices were read at the Linnæan Society, on the lives and characters of several Fellows lately deceased: these sketches will do excellent service to biographers, in future times. 13. For miscellanies, you have descriptions of a third living species of the Crinoidea, forming the type of the new genus *Holopus*; of the *Sieboldia*, or gigantic Japanese Salamander, of the *Zootoca vivipara*, and of the *Voluta norrisii*, a new species described by Mr. J. E. Gray according to its distinctive characters. The Annals is illustrated with three plates, comprising many figures whereby the organization of the *Stenotaphrum lepturoide*, *Urena gaudichandiana*, and *Solanum giganteum*, are faithfully represented.

VI.—This number brings the “Annals of Natural History” to the conclusion of their first volume, which, as we judge, has been executed in a very efficient and instructive manner. 1. Mr. Jenyns introduces the Annals for August with remarks on the British Shrews, including the distinguishing characters of two species previously confounded: his synoptical view of these little animals includes, as British, the *Sorex rusticus*, or common Shrew; *S. tetragonurus*, the square-tailed Shrew; *S. fodiens*, the water Shrew; and *S. ciliatus*, the ciliated Shrew, of this writer’s nomenclature. 2. Notes of Sir W. J. Hooker’s, on the “Iatun condenado”—*Lycopodium catharticum*—an efficacious remedy for the leprosy among the Indians of Colombia, deserve well the attention of practical physicians. The professor characterizes the species methodically, and illustrates its structure on a beautifully coloured plate. 3. Dr. Johnston’s descriptions of some Entozoa embrace the characteristics of two species, the Phylline *hyppoglossi* and the Fasciola *anguille*, both of which are distinctly represented by lithographic figures. 4. An accurate figure, finely executed and coloured, stands as the illustration of Sir W. J. Hooker’s note on the *Erythræa diffusa*; to which some remarks on the genus, by Dr. Griesbach, are appended. 5. Dr. Louis Agassiz’s elaborate monograph, on the Echinodermata, is continued in a translation: with his usual sagacity and precision, he discriminates forty-one species in the present article. 6. His descriptions of British Chalcidites are continued by Mr. Walker; and these are, *Cirrospilus lycophron*, with one variety; *C. coronis*, with three varieties; *C. lycomedes*, with seven varieties; *C. orelia*, *C. chebrias*, with one variety; *C. clinias*, with one variety; *C. endora*, with nine varieties; *C. procles*, *C. abastor*, *C. aratus*, with five varieties, and *C. lagus*, with eight varieties. 7. Here you have an addition to Mr. A. Cunningham’s specimen of the New Zealand botany, comprising *Polygonum australe*, *P. adpressum*, *P. complersum*, and *P. prostratum*; *Rumex crispus* and *R. brownianus*; *Chenopodium triandrum*, *C. botrys*, *C. glaucum*, *C. maritimum*, and *C. fruticosum*; *Salicornia indica*; *Alternanthera denticulata*; *Mniarum bistortum*; *Plantago major* and *P. varia*; *Anagallis arvensis*; *Samolus littoralis*; *Veronica speciosa*, *V. salicifolia*, *V. ligustrifolia*, *V. macrocarpa*, *V. angustifolia*, *V. parviflora*, *V. elliptica*, *V. cataractæ*, *V. diosmifolia*, and *V. calycina*; *Gratiola serdeniata*; *Euphrasia cuneata*; *Rhabdanthus solandri*; *Solanum laciniatum*; *Myoporum laetum* and *M. pubescens*; *Avicennia tomentosa*; *Vitex littoralis*; *Micromeria cunninghamii*; *Anchusa spathulata*; and *Myosotis foetida*. 8. Under the head of information respecting botanical travellers, is an account of Mr. Gardner’s proceedings at Pernambuco, wherein he describes, at considerable length, the general appearance of the country and nature of the vegetation in such parts as he visited: this article abounds with curious and valuable information. 9. Mr. Rigg’s experimental inquiry into the influence of nitrogen on the growth of plants, occupies the place of “a proceeding” of the Royal Society. At the Linnæan Society were read, Mr. Hogg’s observations on the *Spongilla fluviatilis*; Mr. Blackwall’s paper on the number and structure of the mammulæ employed by spiders in the process of spinning; Mr. Schomburgk’s description of a new species of *Catleya*, a splendid orchideous epiphyte, remarkable for the beauty and fragrance of its flowers; and Mr. Bentham’s observations on some genera of plants connected with the Flora of Guiana; and these are the *Symplocos*, *Anthodiscus*, and *Sequiaria*, whose five species—*parviflora*, *coriacea*, *longifolia*,

floribunda, and *macrophylla*—he briefly characterizes. An abstract of the Botanical Society's proceedings exhibits a variety of interesting notices. 10. For miscellanies, you find sketches of two recent species of *Trigonia*, the *margaritacea* and *lamarkii*; notes on the sexes of Limpets; and an account of the habits of *Patella pellucida*, its habitats and food.

VII.—Mr. MacLeay describes some new forms of Arachnida, four of which at least he regards as very singular, and are selected as such out of a great variety of new forms in his cabinet. The forms here delineated are, the Nops *guanabacoa*, *Hypoplatea celer*, *Deinopis lamia*, *Myrmarachne melanocephala*, and *Otiotrops walckenaeri*; with five illustrative coloured figures. Mr. M.'s aim is, to show that a true spider may have a distinct head; that spiders may have an articulated thorax and abdomen; that spiders may have only two eyes; that those which have eight may have them disposed in systems very different from any of the systems hitherto described; and that, although spiders in general have their labial palpi like feet, some species, on the other hand, may have their true feet like palpi, and their labial palpi without ungues. For the second article, you find a continuation of Mr. Thompson's observations on Fishes new to Ireland: these are, *Mostella glauca*, the mackerel midge; *Phycis furcatus*, the common fork-beard; *Platessa pola*, the pole; *Solea lingula*, the red-backed sole; *S. variegata*; *Anguilla latirostris*, the broad-nosed eel; *Ammodytes tobianus*, the wide-mouthed sand-eel; *Syngnathus typhle*, the deep-nosed pipe-fish; *S. ophidion*, the snake pipe-fish; *Hippocampus brevisrostris*, the sea-horse; *Petromyzon planeri*, the fringed-lipped lamprey; and *Gobius gracilis*, in an "addendum" to a former contribution. Mr. Ball's botanical notes of a tour in Ireland, with notices of some new British plants, is a very interesting and valuable communication. In Dr. Walker's account of the genus *Langsdorffia*, two species—the *L. janeirensis* and *L. indica*—are characterized. Dr. Parnell's description of a new species of British fish, *Motella cimbria*, the four-bearded rockling, is illustrated with a finely executed lithographic figure. In an additional note on the British shrews, Mr. Jenyns gives the distinguishing characters of *Sorex tetragonurus*, the square-tailed shrew, and *S. castaneus*, the chestnut shrew; and he adds a remark on his alleged error of considering the British water shrew as distinct from the *Sorex fodiens* of the continent. Another portion of Mr. Allan Cunningham's specimen of the botany of the New Zealand islands, includes a phytology of *Calystegia sepium* and *C. soldanella*, *Ipomœa pendula*, *Dichondra repens*, *Gentiana saxosa* and *G. montana*, *Sebœa gracilis*, *Geniostoma ligustrifolium*, *Parsonsia heterophylla*, *Olea aprtala*, *Achras costata*, *Myrsine urvillei* and *M. divaricata*, *Cyathodis acerosa*, *Leucopogon fasciculatus*, and *L. fraseri*, *Pentachondra pumila*, *Epacris pauciflora*, *Dracophyllum latifolium*, *D. longifolium*, *D. rosmarinifolium*, and *D. urvillianum*, *Gualtheria antipoda*, *G. rupestris* and *G. fluviatilis*, *Wahlenbergia gracilis*, *Loebelia alata*, *L. angulata*, *L. littoralis*, *L. submersa* and *L. physaloides*, *Stylidium spathulatum*, *Fostera sedifolia*, *Goodenovia repens*, and *Scaevola nova zealandica*: the presence of barbated stipuliform appendages at the axillæ, as also of the bilocular fruit, has induced Mr. C. to place this plant with the *Goodenovæ* rather than with the *Euphorbiacæ*: his "specimen" has the curious feature of exhibiting the native designations of the plants and their positions. Seventy-two articles are noted in a continuation of Mr. Eyton's attempt to ascertain the Fauna of Shropshire and North Wales; and this brings you to

the chapter of information respecting botanical travellers, which communicates a series of most important particulars concerning M. Schimper's Abyssinian journey. There are three "bibliographical notices" in this number of the Annals, and then come the "proceedings of learned societies." At the 'geological,' Mr. Owen read a description of Viscount Cole's specimen of *Plesiosaaurus macrocephalus*: at the Edinburgh 'royal,' Sir Charles Bell read a comparison of the nerves of the spine with those of the encephalon, and Dr. Macdonald made some verbal observations on the osseous structure of fishes: at the Irish Academy a paper by Mr. Thompson was read on the Irish hare and its peculiarities; and at the "zoological," a short communication upon Trogon *resplendens*, the long-tailed trogon, was made by the Prince of Musignano; a drawing of a new species of Tetrapturus was exhibited by Mr. Gray, who proposed the *herchelii* for its specific name; Mr. Martin characterized a new bat, the *Rhinolophus landeri*, and produced a specimen; he also communicated a descriptive notice on a new species of hedgehog, and proposed *Erinaceus comcolor* for its distinctive appellation; the characters of *Macropus bennetti*, were pointed out by Mr. Waterhouse, and those also of *Mus subpinosus*, a new species of Mouse: Mr. Gray described a very singular form among the Caprimulgidae or goatsuckers, for which he selected the term *Amblypterus* to be the generic designation; and, by the same naturalist, the characters of *Ibis strictipennis*, *Platalea regia* and *P. flavipes*, were briefly enumerated: here the substance of all these excellent contributions to natural history are given succinctly in descriptive outlines. For miscellanies are a note on Dressing's helminthology, Mr. Smith's remarks on the nest and eggs of the water-rail, Mr. Gray on the walking of the seal, and a notice of Corda's anatomy of *Hydra fusca*, the brown fresh-water polypus: then, as usual, the Septembrian Annals close with meteorological observations and tables.

The London and Edinburgh Philosophical Magazine and Journal of Science; conducted by Sir David Brewster, F.R.S. Richard Taylor, F.G.S. and Richard Phillips, F.R.S. 8vo, London, 1838.

JULY, Supplementary No.—This has, for the first article, Professor Forbes' researches on Heat, in a second series; and, in this, he treats on the use of the thermo-multiplier; the polarization of heat by tourmaline; the laws of the polarization of heat by refraction, and by reflection; and on the circular polarization of heat. Professor Johnston, in prosecuting his investigation of the composition of certain mineral substances of organic origin, furnishes an analytical exposition of the Retin Asphalt, its resin and the salts of retinic acid—the retinates of silver, lead, and lime. As proceedings of the Geological Society, you have Mr. Austen's paper on the geology of the south-east coast of Devonshire; Mr. Weaver's, on the geological relations of North Devon; Dr. Bell's geological notes on Mazunderan; Mr. Burr's on the geology of the line of the proposed Birmingham and Gloucester Railway; Mr. Morris' on the coast section from White-cliff Lodge, near Ramsgate, to the cliffs in Pegwell Bay; Sir J. Herschel's on the theory of volcanic phenomena; Mr. Bollaert's on the insulated masses of silver found in the

mines of Huantaxaya; Mr. Clarke's on the peat-bogs and submarine forests of Bourne Mouth; Mr. Hamilton's on the geology of Asia Minor; Mr. Strickland's on some dikes of calcareous grit in Ross-shire; Mr. Darwin's on the connexion of certain volcanic phenomena, and on the formation of mountain-chains and volcanos, as the effects of continental elevations; and Professor Owen's on the dislocation of the tail, at a certain point, in the skeletons of many Ichthyosauri. At a meeting of the Zoological Society, Mr. Martin read observations on the Proboscis Monkey; and Mr. Waterhouse directed attention to several small quadrupeds, belonging to the genera *Phasogale* and *Mus*, which he considered to be undescribed. Mr. Ogilby noticed the generic and specific characters of two species of his new genus *Kemas*; Mr. Owen submitted remarks on the cranium of the Orang Outang, exhibiting a transitional state of dentition; and he then offered some observations on a preparation of foetal Kangaroo, with its accompanying uterine membranes. With intelligence, and miscellaneous articles relating to the tartaric and paratartaric acids, to the action of fermentation on a mixture of oxygen and hydrogen gases, and to the action of sulphate of ammonia upon glass, the Supplement to volume twelfth is concluded.

JULY ushers in a new volume, with the plan of education for students in civil engineering and mining, in the University of Durham; the new course of study there established is such as to form, not merely a school of civil engineers, but also a school of miners, wherein persons likely to be, through life, engaged either in excavating the mineral wealth with which the country abounds, or in converting the raw material into an article of commerce, may obtain such information on these various subjects as may be required. Mr. Potter comes next, with remarks on the radii and distance of the primary and secondary rainbows, as found by observation, and on a comparison of their values with those given by theory; and he is followed by Col. Emmett, with meteorological observations taken at St. George's, Bermuda, in the latter half of 1837. Dr. Bird proposes, in another section of his experimental researches on the nature and properties of free and combined albumen, chiefly in relation to carbonic acid and electric currents, to detail some facts which tend to support his previously expressed remark—that these investigations would serve to point out the presence of albumen in certain animal fluids in which it was unsuspected, and thus reveal some new combinations of this important product of organization. Two articles are furnished by Professor Johnston, on the elastic bitumen of Derbyshire as a mineral substance having an organic origin, and on the separation of oxalic from other organic acids; and, after these papers, comes one by Dr. Hare, on the re-action of the essential oils with sulphurous acid as evolved in union with æther in the process of ætherification or otherwise. Mr. Holtzapffel explains a scale of geometrical equivalents for engineering and other purposes, adding illustrative figures; and this article is followed by Mr. Lamington's doctrines on the primary forces of electricity, in continuation. Mr. Binks' second communication on some of the phenomena and laws of action of voltaic electricity, and on the construction of voltaic batteries, embraces three sections, intitled subjects of inquiry, the principle of investigation, and the method of investigation with preliminary experiments. For intelligence and miscellanies, you have a record of the circumstances attendant on the festival in honour of Sir John F. W. Herschel, and in commemo-

ration of his return from Southern Africa, after having executed a minute astronomical survey of the southern hemisphere; a notice of a French memoir on the action of light on solution of cyanogen; Mr. Walter's process for preparing bichromate of perchloride of chromium; and meteorological observations and tables.

AUGUST gives you, as a beginning, Mr. Ivory's problem on the conditions of equilibrium of a homogeneous planet in a fluid state; and Mr. Lubbock's theorem on a property of the conic sections. Seven figures on a plate illustrate Mr. Waldie's experimental researches on combustion and flame, which he conducts on a new method of investigation; and Professor Forbes' researches on heat embrace discussions on the unequally polarizable nature of different kinds of heat; on the depolarization and the refrangibility of heat, with figures in illustration. Dr. Apjohn details the means he employed for determining the nature of a new compound, consisting of iodide of potassium, iodine, and the essential oil of cinnamon, originating in an unchemical medical prescription. In his researches on the composition of coal, Mr. Richardson subjected four different kinds from six different fields—the splint, cannel, cherry, and caking—to the test of analytical experiment: here the results are exhibited. Mr. Griffin's arithmetical analysis of mixed salts of potassium and sodium, precedes the second part of Mr. Binks' second communication on voltaic electricity and voltaic batteries, and then you arrive at the proceedings of the Royal Society. Under this head stand three sketches; of an account, by Mr. Thomson, of a line of levels carried across northern Syria, from the Mediterranean Sea to the river Euphrates, with Mr. Ainsworth's geological and botanical notes; of Professor Faraday's supplementary note to the eleventh series of his experimental researches in electricity; and of Mr. Ivory's theory of astronomical refractions, which is unfolded in considerable detail. The miscellanies include Mr. Donne's discovery of the cause of circulation in plants; and, of this, the Chara, or *Stonewort*, is a remarkable example; of Mr. Boussingault's investigations to ascertain whether plants absorb the azote of the atmosphere; of Dr. Rees' paper on the proportion of animal and earthy matter in human bones; and of Professor Kame's formulæ on the ammoniacal and other basic compounds of the copper and silver families. Then, as usual, the meteorological observations and tables prepare you to welcome the arrival of

SEPTEMBER.—For its first article, this month has Professor Schœmbein's discussion of M. Fechner's views of the theory of Galvanism, with reference particularly to a circuit including two electrolytes, and to the relations of inactive iron; and for the next you have Mr. Binks' second communication on the phenomena and laws of voltaic electricity, and on the construction of voltaic batteries. Professor Forbes then treats of the refrangibility of heat, as the third series of his researches on heat, and these are illustrated with two plates. A medical paper stands next in order: it is from the pen of Mr. Gulliver, and consists of experimental observations on the frequent presence, and on the effects of, purulent matter in the blood, in diseases attended by inflammation and suppuration. He thinks his experiments will render it probable that suppuration is a sort of proximate analysis of the blood. Instructions for the qualitative analysis of soluble salts, are furnished by Mr. Griffin, in tables of precipitants for metals and for acids, with supplementary tests, and an easy method of applying sulphuretted hydrogen

gas as a test. M. Fechner then offers a memoir in justification of the contact theory of galvanism. Mr. Graves submits a new and general solution of cubic equations; and Professor Graham adduces a note on the constitution of salts. At the Royal Society, remarks on the theory of the dispersion of light as connected with polarization, were read by Professor Powell; as was a communication of Mr. Rigg's, forming an experimental inquiry into the influence of nitrogen on the growth of plants; and a brief notice of Mr. Bell's paper on rotatory motion, stand for proceedings of that illustrious institution. These are followed by abstracts of Mr. Bowman's notes on a small patch of Silurian rocks on the west of Abergell; Mr. Sowerby's list of fossils, including the species found in the Ludlow rocks; Mr. Malcolmson's notice, on the occurrence of wealden strata near Elgin, on the remains of fishes in the old red sandstone of that neighbourhood, and on raised beaches along the adjacent coast; Mr. Austen's remarks on the origin of the limestones of Devonshire; Dr. Black's description of the fossil stem of a tree recently discovered near Bolton-le-Moor; Mr. Williamson's communication on the distribution of organic remains in part of the oolitic series on the Yorkshire coast; and Mr. Smee's paper on the state in which animal matter is usually found in fossils, appear as proceedings of the Geological Society. Under the section for intelligence and miscellanies, you find Professor Airy's correction of errors in the nomenclature of certain stars in Groombridge's catalogue; M. Kuhlman's remarks and facts on the chemical re-actions of water; M. Peligot's analytical observations on the sugars, and a note on succesterin; and, with the usual meteorological tables, the *September* completes its valuable contributions to philosophy and the sciences.

The Phrenological Journal and Magazine of Moral Science; 8vo, London and Edinburgh, 1838.

No. LVII.—Volume eleventh of the journal is completed by this quarter's publication, which comprises eight miscellaneous papers, eight articles of cases and facts, seven analytical or critical reviews, notes on opinions, short communications and intelligence—forming, altogether, a comprehensive and instructive miscellany, abundantly well calculated to promote the views of unprejudiced inquirers, whose object is to ascertain and diffuse the principles of a true mental philosophy. First, as the leading communication, stand Dr. Combe's remarks on Dr. Pritchard's third attack on Phrenology, in his treatise on insanity. This article of Dr. C.'s constitutes a most beautiful and admirable example of candid, philosophical discussion; and, with the greatest ease imaginable, he convicts Dr. P. of an inveterate unfairness, as amazing as it is lamentable, the result of a prejudice little less culpable than dishonesty. Mr. Cargill comes next, with an excellent inductive sketch founded on facts concerning the organs of Inhabitiveness and Concentrativeness, with an examination of the opinions regarding the functions of that part of the brain which corresponds to the space marked No. iii. on the phrenological busts. After this, stand Mr. Hancock's remarks on the function of the organ called Concentrativeness, with an amusingly edifying and candid note by the editor, who animadverts freely, in the next article, on

the opinions of phrenologists touching the function of the organ of Wit, concerning which a letter of Mr. Rumball's follows in course. For a sixth communication, you have a prominent and faithful representation of the fruits of the hostile misrepresentations of Phrenology, made to students of medicine by their teachers, from the pen of a Bath physician. This paper shows very forcibly that a high-talented and well-educated gentleman, who would scorn to assert that black is white, could, nevertheless, be so infatuated by prejudice as to denounce that for false what he himself did not know to be untrue. You then come to a spirited exposure of a set of stupid misconceptions and silly arguments against the new philosophy of mind, as they have been repeated with the loathsome staleness of superannuation, in a recent number of the *Dublin Journal of Medical Science*. Last of the miscellanies, is Mr. Knight's cases illustrative of the hereditary instinctive propensities of animals. For cases and facts, an ingeniously-contrived exercise for the skill of young phrenologists; two interesting letters of Mr. Combe's, on a case of divided consciousness; Mr. Hodgson's case of enlargement of the organs of Locality, and of pain in those of Form and Size, in a landscape painter; two notes on the connection of insanity with inequality of cerebral development, on the application of Phrenology in the management of insane persons; the phrenological development of Talleyrand; further explanations of Mr. Bedford's case; and Mr. Combe's facts in exposition of the function of that portion of the brain which has been regarded as the organ of the faculty that perceives "the sublime," are concisely delineated. Passing the review department, which is smart and tenny, you arrive at a correspondent's opinion concerning phrenology and materialism, and the editor's conceptions of the signification properly to be attached to the words *mind*, *soul*, and *materialism*. The short communications merit a long study: they refer to the busts of Queen Victoria, Professor Turner, Charles Rossi, and John Reeve, as exhibited at the Royal Academy; to the cast of Jeremy Bentham, wherein the organ of Love of Approbation is enormous; to the musical faculties and their manifestations; and to a uniform penny-postage. As intelligence, are statements and information relative to numerous phrenological lectures and societies, which appear to be greatly on the increase, and in a state of highly encouraging prosperity.

The Magazine of Natural History, and Journal of Zoology, Botany, Mineralogy, Geology, and Meteorology, conducted by Edward Charlesworth, F.G.S. 8vo, London, 1838.

NO. XIX, JULY, 1838.—Mr. Blyth furnishes a leading article for this number, with his analytic descriptions of birds composing the order *Insectores Heterogenes*; and, on this occasion, he considers the zoology of the *Cylindrirostris*, a systematic name proposed by him for the family of rollers, bee-eaters, and kingfishers, and of the *Angulirostris*, as he wishes the family of todies and jacamars to be denominated. In an article on the naturalization of *Dreissena polymorpha*, in Great Britain, from the pen of Mr. Strickland, se-

veral interesting facts connected with the history of this mollusc are recorded. Next in course there comes an elegant and entertaining sketch of Mr. Macauley's, on the flower-gardens of the ancients; this is followed by Dr. Weissenborn's elaborate doctrine on spontaneous generation; and then Mr. Couch advances some observations, with two figures, of *Amphioxus lanceolatus*, the lancelet, a singular little fish, with which the acquaintance of naturalists is very limited. After the reviews, there are nine short communications; Dr. Weissenborn's note on the *Bos urus* and Aurochs of the Caucasian mountains; Mr. Newman's characters of a new genus of *Popillia*; Mr. Westwood's illustrations of *Eulophus nemati*, the saw-fly, and his notes on gynandromorphous hymenopterous insects; Mr. Clarke's remarks on the antennæ of insects; Mr. Blyth's notes on the adult plumage of the female Smew, on the Pomarine Skua, and on native woodcocks; Mr. Luxford's observations on the *Chrysosplenium alternifolium*; and Mr. Bartlett's communications on the plumage of the Smew, wherein he assures you, with confidence, that the adult females possess the black mark round the eye, and that young males obtain this mark some time previously to their assuming the adult garb.

XX.—This, for August, commences with Dr. Brehm's observations on some of the domestic instincts of birds; and here the doctor affirms that most of them not only live in monogamy, but, in a union which ends only with the death of one of the parties, and that the males of almost all the species living in monogamy interest themselves in their progeny. Prof. Owen's paper on the camerated structure in the valves of *Spondylus varius*, the water-clam, is illustrated with two figures, and with a chemical analysis of the fluid carefully withdrawn from the outer chambers of the shell; and the remarks of Sir E. F. Bromhead on zoological classification, are accompanied with an ingenious exhibition of quinaries. Another section of Mr. Blyth's analytic descriptions of the *Insectores Heterogenes*, defines the characters of the Motmots, and comprises a tabular view of the *Streptitores*, distributed according to their successive groups. Mr. Skaife's ornithology of Blackburn and the north of Lancashire, embraces a list of sixty-nine birds, which he distributes according to the arrangement adopted by Eyton in his published catalogue: in his footnotes, Mr. S mentions specimens of a white robin, a white willow-wren, a black lark, a white lark, and a white sparrow. A continuation of Mr. Martin's monograph of the genus *Semnopithecus*, comprises his descriptive characters of *S. nemus*, the douc; *S. entellus*, the rollewai; *S. fascicularis*, the kra; *S. cristatus*, the chingkau; *S. femoralis*, the white-thighed monkey; *S. maurus*, the moor; *S. melalophus*; *S. flavimanus*, the sempai; *S. pyrrhus*; *S. auratus*; *S. fulvo-griseus*; *S. latibarbatu*, the broad beard; *S. johnii*, the johnny; *S. obscurus*, *S. nasalis*, and *S. recurvus*. For scientific intelligence, you have an interesting account of the eighty-sixth annual sitting of the Academy of Sciences at Haarlem; upwards of thirty distinct prize questions on subjects in philosophy, science, and history, are proposed for solution, by this institution. Mr. Blyth's remarks on the plumage of the smew merganser and of the crossbill, and Weissenborn's observations on the effects of the excessive and protracted cold of the last winter, occupy the place of short communications.

XXI.—September has Mr. Heward's observations on a collection of ferns

from Jamaica, for its opening article; and in this, seventy-seven species are enumerated, and their habitates distinguished. This is the list—*Gleichenia imurens*, *Aneimia adiantifolia*, *Polybotrya cervina*, *P. cylindrica*, *Acrostichum sursum*, *A. nicotianefolium*, *Gymnogramma loveti*, *G. gracile*, *G. tartarea*, *G. calomelanos*, *Grammitis elongata*, *G. angustifolia*, *Tænitis lanceolata*, *Polypodium esiguum*, *P. glabellum*, *P. serpens*, *P. phyllitidis*, *P. crassifolium*, *P. pectinatum*, *P. incanum*, *P. sporadocarpum*, *P. loriceum*, *P. simile*, *P. reptans*, *P. smithianum*, *P. crenatum*, *P. lunarianum*, *P. miser*, and *P. effusum*, *Lomaria longifolia*, *Antrophyum lanceolatum*, *Diplazium plantagineum*, *D. juglandifolium*, and *I. obtusum*, *Pteris longifolia*, *P. grandifolia*, *P. plumerii*, *P. concinna*, *P. heterophylla* and *P. caudata*, *Asplenium serratum*, *A. ambiguum*, *A. obtusifolium*, *A. traniense*, *A. auritum*, *A. dentatum*, *A. rhizophorum*, and *A. præmorsum*, *Cænopteris myriophylla*, *Blechnum occidentale*, *Aspidium trifoliatum*, *A. macrophyllum*, *A. ascendens*, *A. exaltatum*, *A. hippocrepis*, *A. sprengelii*, *A. molle*, *A. involutum*, *A. venustum*, *A. pubescens*, and *A. villosum*, *Adiantum macrophyllum*, *A. serrulatum*, *A. radiatum*, *A. cristatum*, *A. trapesiforme*, and *A. tenerum*, *Cheilanthes microphylla*, *Davallia alata*, *Dicksonia cicutaria*, *Woodsia pubescens*, *Cyathea elegans*, *Trichomanes sinuosum*, *T. crispum*, and *T. scandens*, *Psilotum triquetrum*, and *Lycopodium oerumum*. In certain wooded districts of the Island, the ferns are very splendid and exceedingly beautiful in their form; the segments of their multifid fronds, moving with the slightest breath of air, are constantly in motion, and give them a most elegant and graceful appearance; the newly-arrived botanist cannot but be struck with wonder at such a display of ferns, mostly unknown to him; and he is enabled to make a plentiful collection at a small expenditure of labour. Article the second is a monograph of M. Desjardins', on the genus *Leptocera*, with descriptions of two new species found in the Isle of Bourbon: the *Leptocera mezierei* and *L. beaumontii* are the names he has assigned to them, in honour of two distinguished entomological friends. Mr. Clarke, in an ingenious experimental essay on the organs of hearing in insects, with thirteen illustrative figures, concludes that these creatures "could hear as plainly as he could himself," that their antennæ are the organs of hearing, and that the upper part of the antennæ has the power of increasing sound. In a communication on the *Succinea amphibia*, or amber-shell, and its varieties, Mr. Cooper points out some long-prevailing errors respecting this mollusc, and he gives six figures in explanation of his observations. Some entertaining as well as instructive remarks are contributed by Dr. Clarke, on the habits of the *Coluber natriz*, or common snake. Sir E. F. Bromhead proceeds with his remarks on zoological classification; and these are succeeded by Mr. M'Coy's strictures on Mr. Eyton's arrangement of the gulls; and by Dr. Hancock's notes on the *Psophia crepitans*, or trumpeter bird, the *waracobi* of the Arowahs of Guiana. Next, come Mr. Ogilby's reasons respecting the term *Simia* and its application; then Mr. Swainson replies shortly to some of his reviewers; and then are appended some notes by the Editor, relating to the same question.—Under the section intitled scientific intelligence, you see a letter of Lord Tankerville's on the wild cattle in Chillingham Park, and notes on the electric eel, on Artesian wells, on the electrical telegraph, and on the natural history of Nowaja Semlija and the Caucasian regions. Mr. Blyth's remarks on the doctrine of spontaneous generation; observations on the Oubudi, or

great cashew-tree of Guiana; Mr. Harvey's information regarding the *Tubularia indivisa*; his notes on the carrion crow, the rook and the cuckoo, and on white light from burning corallines; Dr. Weissenborn's letter on the *Bos urus* and the instinct of animals; and Mr. Clarke's discovery of a pulmonary orifice in insects, occupy the division allotted to short communications in Mr. Charlesworth's well-conducted and truly scientific magazine.

The Naturalist, illustrative of the Animal, Vegetable, and Mineral Kingdoms, with engravings; edited by Neville Wood, Esquire; royal 8vo, London, 1838.

No. XXIII, *August*.—Mr. Lankester takes the lead in this month's publication with remarks, being the substance of a lecture, on the general structure and habits of invertebrate animals, illustrated with a tabular view in seven figures, ingeniously devised. Notes, by Mr. Proctor, on an ornithological tour in Iceland, are followed by a notice of rare birds obtained in the winter of 1837–8, by Mr. Blyth, and then by Mr. Torre's list of birds found in Middlesex, amounting to one hundred and thirteen species. Next in order, are the chapters of correspondence and criticism, and the extracts from foreign periodicals, consisting of sketches on the hybernation of swallows, on the fresh-water and marine sponges, on a hanging bird's nest framed of silver wire, on the feeding of silk-worms on the fecula of potatoes, on a Malayan albino, on vegetable acids, on a fossil salamander, on a skeleton of the narrow-mouthed mastodon, and on vases discovered in the tombs of Santorini.—Among the proceedings of natural history societies, those of the entomological, horticultural, and zoological, are briefly noted. At the ornithological Mr. Blyth exhibited specimens of the three British geese allied to the domestic breed, and then offered a variety of observations on them, and on some rare birds obtained in the London markets; and, at the botanical, a paper of Dr. Wallis' was read on the genus *Myosotis*: he advances an ingenious suggestion concerning the *M. arvensis* and *M. sylvatica* and their specific distinctions. The Miscellanies are numerous and varied, and not unimportant; and, with two reviews, the *August* is concluded.

XXIV.—Under six distinct heads, Mr. Watson describes the effect of the winter of MDCCLXXXVII on vegetation in the neighbourhood of Thames Ditton: this is a truly practical article, the result of observation. It is followed by an anonymous communication on the sources of heat which influence climate: the writer traces this heat to the calorific power of the solar rays, the temperature of the planetary spaces, the heat of the earth's central mass, and the calorific changed by every variation from one state to another. Next in course, Mr. Wood explains his views respecting the exciting causes of varieties in birds and other animals; and his paper is followed by that of Mr. Hall, on the habits and peculiarities of British plants, and on the derivations of their Latin names. Mr. Neville Wood then gives a "condensed analysis" of Part XVI of Gould's "Birds of Europe," and the prologue to his article exhibits the prominent features which distinguish Mr. W.'s lite-

rary character—juvenile vanity, heartless illiberality, and false representation. Mr. Pigott favours the editor with a correspondence professing to be general remarks on the *Naturalist* and natural history ; and the chapter of criticism is occupied by a “few words” of Mr. Lankester’s on the formation of pearl, and by some words of his on the Linnæan and natural systems of botany. At the Liverpool natural history society, the discovery of a large slab of sandstone, “having upon its lower face a number of casts of feet in high relief,” was taken into consideration, and a report of the discussion stands here as a “proceeding” of that institution. The *Miscellanies* make a chapter of selections from *Withering’s Botany*, the *Athenæum*, and other periodicals ; and with its September number the second volume of the *Naturalist* is concluded.

METEOROLOGICAL REPORT.—MAY.

Philosophical Institution, Birmingham.

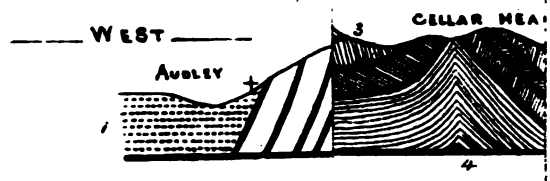
May.	9 o'clock, a.m.		3 o'clock, p.m.		Dew Point, deg. Fah. 9 a.m. 3 p.m.	External Thermometers.		Rain in Inches, read off 9 a.m.	Direction of wind at 9 a.m.	Remarks.									
	Bar.	Ther.	Bar.	Ther.		Fahrenheit. 9 a.m. 3 p.m.	Self-register. Lwat. Hbat.												
1	29.08	47.0	29.06	49.5	41.0	46.5	38.0 49.0	.160	E.	Overcast, 9 a.m.; heavy showers, p.m.									
2	29.25	53.0	29.25	58.5	48.0	51.0	54.0 61.5	.355	S.S.E.	Clouded, with a slight deposition; heavy rain at night.									
3	29.27	56.0	29.34	58.5	50.0	49.5	64.5 57.5	.135	S.E.	Overcast, 9 a.m.; very fair.									
4	29.50	56.0	29.52	57.0	48.5	50.0	54.0 59.0	.220	S.W.	Fine morning; overcast towards noon; rain from 2; heavy shower, 5½ p.m.									
5	29.71	54.5	29.70	56.0	49.5	51.5	52.5 53.0	.220	N.	A deposition at 9 a.m.; heavy rain, a.m.; fair, p.m.									
6	29.82	53.0	29.82	57.0	43.5	59.5	45.0 58.5	.290	N.N.E.	Very fair.									
7	29.85	53.0	29.85	60.0	46.0	54.0	68.0 69.0		N.	Very fair.									
8	29.85	58.0	29.80	62.5	50.0	54.0	62.5 72.0		N.E.	Very fair.									
9	29.72	62.0	29.68	69.5	48.0	53.5	66.0 73.0		N.N.E.	Very fair, a.m.; overcast towards evening.									
10	29.86	58.0	29.87	60.5	44.5	47.0	48.5 56.0		N.N.E.	Overcast, 9 a.m.; fair after.									
11	29.80	53.0	29.81	59.0	42.0	42.0	50.0 60.0		N.N.E.	Very fair.									
12	29.64	54.5	29.51	60.0	38.5	43.0	57.0 66.5		N.N.E.	Very fair.									
13	29.24	56.0	29.2	54.0	41.0	42.0	48.0 44.3	.100	W.N.W.	A slight deposition at 9 a.m.; showers, p.m.									
14	29.2	50.0	29.2	51.5	33.5	40.0	48.0 36.3		N.	Very fair.									
15	29.37	50.0	29.27	51.0	36.0	36.0	48.0 50.5		N.N.E.	Fair, but occasionally overcast.									
16	29.34	50.0	29.32	52.0	37.5	37.5	47.0 51.0		N.N.E.	Fair, a.m.; clouded, with thunder-showers, p.m.; wind very variable.									
17	29.35	48.5	29.31	52.0	35.0	39.5	51.0 54.0	.025	E.S.E.	Fair, a.m.; clouded, with a slight deposition, towards night.									
18	29.36	51.0	29.24	51.5	38.5	42.5	48.5 52.0	.005	N.	Fair, a.m.; rain, with a brisk wind from the E.S.E., p.m.; greatest									
19	29.36	51.0	29.24	51.5	43.5	45.0	44.5 49.0	.230	E.S.E.	Showers. [force, 7lbs., at a quarter before 6.									
20	29.06	52.5	29.03	54.75	47.0	45.0	50.0 52.5	.190	S.	Overcast, a.m.; rain, p.m.; a brisk wind from the W., force 7lbs.									
21	29.99	55.5	29.06	58.0	49.0	47.0	52.0 57.5	.225	N.	Overcast, but fair; rain at night.									
22	29.0	54.0	29.06	55.5	49.0	45.0	49.0 52.0	.180	S.	Heavy rain, a.m.; clearing up, 3 p.m.; fair after.									
23	29.26	53.5	29.31	53.0	43.5	43.5	50.0 51.0	.065	W.	Fair, but overcast, a.m.; rain, p.m.; a brisk wind from the W., force 7lbs.									
24	29.45	52.5	29.46	54.5	43.5	47.5	48.5 53.5		N.	Overcast all day.									
25	29.52	52.5	29.54	57.0	46.0	48.0	46.0 59.0		N.N.E.	Overcast, but fair.									
26	29.59	52.75	29.59	52.75	47.0	48.0	46.5 60.5		N.N.E.	Overcast, but fair.									
27	29.51	54.5	29.4	57.0	47.0	46.5	50.5 53.0		N.N.E.	Fair, a.m.; overcast, p.m.									
28	29.12	54.5	29.08	58.5	50.5	50.0	61.5 58.5	.005	N.N.E.	Overcast, with a slight deposition, 9 a.m.; showers.									
29	29.27	57.0	29.11	60.0	52.5	53.0	57.0 47.0	.125	S.E.	Clouded, with light showers.									
30	29.27	59.0	29.32	63.0	50.0	50.5	62.0 50.5	.025	S.S.W.	A fine morning; very fair.									
31	29.42	59.5	29.42	63.0	49.5	53.0	63.0 47.0		S.W.										
Mean								29.42	53.89	29.41	56.82	44.89	46.51	51.19	55.18	42.94	56.73	2.336	Sum.
Height of the cistern of the barometer above the ground, 23ft. 6in.																			
Height of the cistern of the barometer above the presumed mean level of the sea, 472ft. 6in.																			
Height of the external thermometer above the ground.—Fah. 4ft. 6in.; Self-reg. 4ft. 6in.																			
Height of the receiver of the rain-gauge above the ground, 3ft.																			

	9 o'clock a.m.	3 o'clock p.m.	Dew Point, deg. of Fah.	External Thermometers. Fahrenheit.	Rain in Inches, read off at 9 a.m.	Direction of Wind	Remarks.
June	Bar. Ther.	Bar. Ther.	9 a.m. 3 p.m.	9 a.m. 3 p.m.	9 a.m. 3 p.m.	9 a.m. 3 p.m.	
1	29.47 58.5	29.42 61.0	51.0 55.0	51.0 56.5	48.0 58.0	N.E.	Overcast a.m.; rain p.m.
2	29.31 59.0	29.28 61.0	53.5 55.5	54.0 56.0	50.0 61.5	S.S.E.	Overcast 9 a.m.; heavy showers, with thunder, p.m.; wind variable.
3	29.26 60.0	29.2 63.5	55.0 57.0	60.5 49.0	63.0 50.0	S.	Fair, but clouded, a.m.; rain p.m.
4	29.2 60.5	29.24 64.5	51.0 50.5	57.0 63.0	50.0 64.0	S.S.E.	Very fair a.m.; overcast p.m.; light showers at night.
5	29.1 61.0	29.42 65.5	49.5 51.5	58.0 67.0	50.0 68.5	W.S.W.	Very fair.
6	29.68 59.5	29.64 66.5	45.0 52.0	64.5 46.0	55.5 55.5	W.N.W.	Very fair a.m.; rain towards night.
7	29.71 57.0	29.68 58.5	42.0 44.5	51.0 58.75	44.0 59.5	W.N.W.	Very fair.
8	29.77 55.0	29.77 59.0	38.0 42.5	55.0 62.0	42.0 62.5	N.N.W.	Very fair.
9	29.69 58.5	29.69 62.25	46.0 45.0	55.5 60.0	45.0 61.0	S.	Fair a.m.; light floating clouds p.m.
10	29.34 59.5	29.13 60.0	50.0 52.0	54.0 58.0	60.0 49.0	S.E.	Overcast a.m.; light rain p.m.
11	29.07 59.5	29.07 62.0	54.5 56.0	56.0 59.5	50.0 62.0	N.	Showers a.m.; overcast, with rain, at night.
12	29.1 60.0	29.15 63.0	53.5 55.0	56.5 57.0	52.0 61.5	N.E.	Overcast, thunder showers.
13	29.23 58.5	29.23 60.5	52.5 54.0	56.8 51.0	57.5	N.	Overcast, but fair.
14	29.21 59.5	29.21 62.0	55.0 55.5	57.0 61.5	49.0 62.0	S.S.W.	Clouded, with light showers.
15	29.23 59.5	29.21 61.0	55.0 56.5	56.0 57.0	49.0 59.0	S.	Clouded, but fair, a.m.; showers p.m.
16	29.37 61.5	29.31 66.0	54.0 58.5	64.0 65.0	54.0 66.0	S.	Clouded, but fair, a.m.; light rain at night.
17	29.36 61.5	29.36 70.0	60.0 62.5	68.0 70.5	57.0 73.0	S.S.W.	Overcast 9 a.m., very fair after; light rain at night.
18	29.19 66.0	29.04 68.0	61.0 64.0	61.5 67.5	57.0 68.5	E.	Overcast a.m.; heavy thunder shower when dew point taken, 3 p.m.; rain.
19	29.23 63.0	29.31 65.5	51.0 54.5	57.5 62.0	53.0 64.0	S.W.	Overcast, but fair; brisk wind from S.W., greatest pressure 6th.; rain at night.
20	29.18 62.0	29.15 64.0	56.5 59.0	66.0 61.0	50.0 63.0	S.E.	Slight deposition 9 a.m.; showers p.m.; S.E. wind; gr. press. 8th. 11 p.m.
21	29.06 62.0	29.11 63.0	49.5 56.0	57.5 61.0	52.0 64.0	S.W.	Overcast, occasional sunshine, rain even; S.S.W. wind; gr. for. 9th. 5 p.m.
22	29.24 60.5	29.31 64.0	50.0 50.5	56.0 61.5	49.0 62.0	S.	Showery; much wind from the S.S.W.; greatest force 8th., at 1½ hours p.m.
23	29.65 60.0	29.72 65.0	53.0 54.0	61.0 67.5	49.0 69.0	S.S.W.	Very fair a.m.; overcast p.m.
24	29.52 63.0	29.52 70.0	57.0 58.0	65.0 73.0	50.0 74.0	S.E.	Very fair.
25	29.6 67.0	29.6 69.0	54.5 55.0	63.5 69.5	55.0 70.0	N.W.	Very fair; rain during the night.
26	29.52 66.0	29.51 64.5	58.0 58.5	68.0 58.5	56.0 59.5	E.N.E.	A slight deposition 9 a.m. and 3 p.m.; overcast all day.
27	29.5 62.5	29.5 64.5	57.5 52.0	61.0 55.0	61.5 61.5	S.S.E.	A slight deposition; overcast p.m.
28	29.63 62.0	29.63 67.0	49.0 55.0	68.0 67.5	49.0 68.5	S.	Very fair.
29	29.6 61.0	29.5 62.0	50.0 55.0	61.0 58.5	49.0 65.0	W.	Very fair a.m.; overcast; thunder shower p.m.
30	29.46 60.5	29.42 66.0	51.5 54.5	60.5 66.0	47.0 68.0	S.E.	Fair a.m.; clouded p.m.; rain at night.
Mean	29.38 61.0	29.37 63.62	51.96 54.13	67.26 61.89	50.16 63.73	2.080 Sum.	
Barometer.	9 a.m. 30.77 21st/22nd/07	3 p.m. 30.77 21st/22nd/07	Thermometer. 71.0 24th 42.0 21st	9 a.m. 71.0 24th 42.0 21st	Dew Point. 61.0 71.0 42.0 21st	3 p.m. 61.0 71.0 42.0 21st	Height of the clatern of the barometer above the ground, 25ft. 6in. Height of the clatern of barometer above the presumed mean level of the sea, 472ft. 6in. Height of the external thermometers above the ground, 5ft. 6in.; S.W. 4ft. 6in.; S.E. 4ft. 6in. Height of the receiver of the rain-gauge above the ground, 30ft.

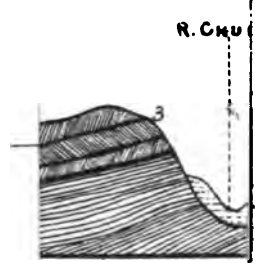
JULY.

9 o'clk. a.m.		8 o'clk. p.m.		Dew Point, deg. Fah. 9 a.m. 3 p.m.	External Thermometers.		Rain in Inches, read off at 9 a.m.	Direction of Wind at 9 a.m.	Remarks.			
Bar.	Ther.	Bar.	Ther.		Fahrenheit. 9 a.m. 3 p.m.	Self-register. Lwst. Hghst.						
1	29.38	63.0	29.46	65.0	55.5	54.0	57.5	64.0	51.0	66.0	S.E.	Overcast, but fair, rain during the night.
2	29.56	63.0	29.56	66.5	57.5	59.0	57.5	68.0	55.0	69.5	E.	A slight deposition 9 a.m.; clouded; heavy rain at night.
3	29.68	66.0	29.6	66.5	59.5	60.0	62.0	64.0	57.0	67.0	N.	Overcast, but fair.
4	29.68	66.0	29.63	67.5	60.5	59.5	63.0	65.0	58.0	67.0	W.N.W.	Very fair.
5	29.68	65.0	29.68	69.0	60.0	60.0	65.0	72.0	58.0	72.5	S.S.E.	Very fair; rain during the night.
6	29.53	67.5	29.46	71.0	62.5	62.5	64.0	70.0	58.0	71.0	S.E.	Fair a.m.; a heavy shower p.m.; rain at night.
7	29.44	65.0	29.44	67.5	55.0	56.0	59.0	62.0	51.5	64.0	S.S.E.	Overcast, but fair a.m.; a brisk wind, with rain, p.m.; greatest force of the [wind, 4½h, at 1½ hours.
8	29.44	64.50	29.46	68.0	55.0	55.50	61.0	65.50	53.0	67.0	W.S.W.	Overcast nearly all day.
9	29.66	64.5	29.65	69.5	57.0	58.0	60.0	71.0	54.0	71.5	S.	Very fair.
10	29.66	66.5	29.64	70.5	54.5	56.5	62.0	67.0	55.0	69.0	S.E.	Very fair a.m.; showers p.m.
11	29.61	67.0	29.6	69.0	61.5	62.5	63.5	67.0	57.0	69.0	S.	Overcast, but fair, a.m.; heavy showers p.m.
12	29.52	68.0	29.55	69.0	62.0	63.0	65.0	68.0	59.0	69.0	S.W.	Overcast, but fair.
13	29.61	67.5	29.53	71.5	60.0	60.0	61.0	70.5	58.0	71.0	S.S.W.	Overcast, but fair.
14	29.19	69.0	29.17	67.5	64.0	64.0	64.0	59.0	58.0	70.5	S.S.E.	Overcast 9 a.m.; showers all day; a brisk wind from S.S.E., greatest force at [before 4 p.m., 6½h.
15	29.18	64.0	29.3	73.5	55.0	59.0	60.0	59.0	55.0	67.0	S.	Overcast 9 a.m.; fair p.m.
16	29.56	63.0	29.31	72.0	53.0	52.0	59.5	66.0	51.5	67.0	S.S.W.	Very fair.
17	29.66	64.5	29.61	68.0	53.0	59.0	60.0	65.0	50.0	64.0	S.	Overcast 9 a.m.; a slight deposition at night.
18	29.66	64.5	29.76	72.0	57.0	55.0	63.0	68.5	56.0	70.0	W.N.W.	Overcast 9 a.m.; very fair.
19	29.75	64.5	29.7	73.0	54.5	56.5	63.5	68.0	53.0	69.5	S.S.W.	Very fair; rain at night.
20	29.63	66.0	29.68	69.5	51.5	51.0	60.0	66.5	55.0	66.5	W.S.W.	Overcast 9 a.m.; very fair.
21	29.61	62.0	29.68	69.5	51.5	51.5	60.0	66.5	52.0	68.5	W.S.W.	Very fair; rain at night.
22	29.71	62.0	29.71	65.0	48.5	50.0	57.0	59.0	48.0	62.0	N.N.W.	Fair, but overcast.
23	29.71	60.0	29.64	68.0	49.5	51.0	58.0	64.0	48.0	66.0	W.N.W.	Fair a.m.; light rain p.m.
24	29.75	61.0	29.54	63.0	50.0	51.0	58.0	60.0	40.0	62.0	N.W.	Very fair.
25	29.64	59.5	29.53	64.5	49.5	47.5	55.0	61.0	48.0	63.0	N.W.	Fair a.m.; overcast p.m.
26	29.45	60.5	29.34	61.5	52.0	54.0	54.0	47.0	61.0	61.0	S.	Overcast a.m.; rain p.m.; a brisk west wind, greatest force 5h.
27	29.45	59.5	29.36	67.5	48.0	51.0	56.0	63.0	50.0	65.0	W.	Very fair.
28	29.3	60.5	29.25	63.5	53.5	56.0	60.0	58.0	49.0	55.0	S.S.W.	Fair a.m.; showers p.m.
29	29.15	61.5	29.12	60.0	51.0	53.5	57.0	56.5	50.5	59.0	S.	Showers, with occasional sunshine.
30	29.16	59.5	29.18	61.0	51.0	55.5	57.0	48.0	60.0	63.0	S.W.	Showers, with hail.
31	29.34	59.5	29.41	63.0	53.5	50.0	58.0	63.0	48.0	63.5	W.	Overcast, but fair.
Mean		29.49	63.40	29.51	67.96	56.08	56.34	59.83	53.08	66.29	Sum.	
Height of the cistern of the barometer above the ground, 25ft. 6in.												
Height of the cistern of barometer above the presumed mean level of the sea, 479ft. 6in.												
Height of the external thermometers above the ground—Fah., 4ft. 6in.; Self-reg., 4ft. 6in.												
Height of the receiver of the rain-gauge above the ground, 28ft.												

SECTION

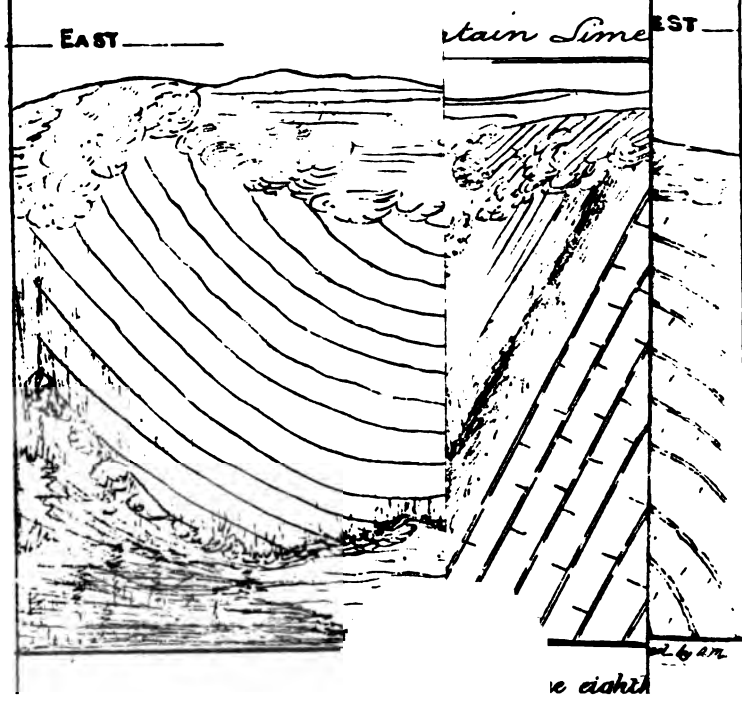


SECTION



1. Mill Stone Gr

DIAGRA



CRITICAL OBSERVATIONS ON BISHOP BURNETT'S
 "HISTORY OF THE REFORMATION OF THE
 CHURCH OF ENGLAND."

IN a season of great political convulsion, when it was almost an impeachable offence for any honest or right-judging man to hint his doubts concerning the reality of the popish plot; when a king was upon the English throne who had so basely apostatized from the faith he had sworn to his people, as willingly to co-operate in all the plans suggested for sweeping away the bulwarks of protestantism, and whose courtiers, for the most part, were of that unprincipled feebleness, servility, and corruption, as to submit passively to his deeds of infamy; in this perilous and degraded state of public affairs, so utterly unsafe for any writer, not the apologist or panegyrist of despotism, Bishop Burnett produced his celebrated work, the "History of the Reformation of the Church of England." According to his enemies, this performance owes its origin to an overweening confidence in his own powers, assisted by mercenary views of personal advantage. If, however, we are to credit his own assertions, and assuredly no substantial reason can be alleged why we should not, he was solely influenced to this great undertaking by the praiseworthy motive of showing, as he says, "what popery and what the Reformation was,"* and, by this confrontation of the doctrines and the discipline of the national churches, to prove to what aggressions of civil and ecclesiastical tyranny a country would be exposed by the actual establishment of a religion such as that of Rome.

But some critics, in pointing out the principles and tendencies of these different and opposed systems of action, with more warmth than fairness, in our opinion, have asserted that the understanding of our historian is so warped by his profession, and his head so filled with the most chimerical fears and fancies, that, though his reasonings may be formed on facts, yet his views, whenever he touches upon the debatable ground of popery, are neither large, liberal, nor enlightened. Higgons, Sewell, Cole, and other writers still less favourable to his memory, have accused him, not only of preserving no temperance of

* Introduction to the *Hist. of the Reform.* vol. iii, p. xxviii, Oxford edition. "He gave," says Gorton," his first volume to the public in 1679, when the affair of the popish plot was in agitation; the second appeared in 1681; but the third volume, which was supplementary, not until 1714.—See *Gen. Biog. Dict.* vol. i, p. 364.

judgment, but even of contaminating the page of history with the most furious sallies of political and religious animosities, in all his references to this subject. But we should be born approximate to the times of Burnett, rightly to appreciate his sentiments in this respect. At the period in which he lived, intolerance towards popery was justifiable on the footing of self-defence; and those disabilities compared by some to the edicts of arbitrary power, were then absolutely necessary to prevent the repetition of the terrific and sanguinary scenes which Europe had witnessed for upwards of a century from the violent and domineering spirit of the apostolic see. What Burnett affirmed experience had too fatally demonstrated; that the horrors preceding the Feast of St. Bartholomew,* the massacres in the Netherlands, and Switzerland, the wars of the League, of Flanders, and of Holland, and the fires of Smithfield—some of the bloodiest atrocities the

* Lord Clarendon calls 1570 "that infamous year," in allusion to the dreadful blow inflicted on the rights of humanity by the Massacre of St. Bartholomew. "An event," he remarks, "attended and accompanied with as foul dissimulation and horrid perjury as ever added deformity to wickedness."—*Religion and Policy*, p. 427. The Christian law inculcated the love of enemies; how widely, then, must the Roman pontiff, Grégory XIII, have departed from the mandate of our Divine Master! for no sooner was an account brought to him of that atrocious deed, than he went in procession to the church of St. Louis, in Rome, to return thanks to God for it, as for a happy victory; sent a nuncio to France to congratulate the king, and caused medals to be struck, and pictures to be painted, in commemoration of it. The butchery which took place in Paris was afterwards renewed in other towns of France. Dr. Lingard has specified the dates. No wonder that the detestable sentiment avowed in Cardinal Allen's book, that it was not only lawful, but *honourable*, to kill the excommunicated, should be supported by the practices, as well as the applause, of the many.—See an account of Cardinal Allen's admonition to the nobility and people of England, in Fuller's *Church History*, cent. xvi, p. 196. Cambden, indeed, tells us that "in the English Seminary at Rheims some there were who, with a certain astonishment, admiring and reverencing the omnipotency of the Bishop of Rome, did believe that the bull of Pius Quintus against Elizabeth was dictated by the Holy Ghost. These men persuaded themselves, and others that eagerly desired and itched after the glory of martyrdom, that it was a meritorious act to kill such princes as were excommunicated; yea, that they were martyrs who lost their lives on that account."—See *Annales Rerum Anglicarum Regnante Elizabetha Angl.* Lond. 1688, fol. p. 216. Even some of the staunchest adherents of popery have, after the maturest deliberation, come to the conclusion that the Protestant Reformation was mainly produced by the flagrant abuses of power in the Romish church.—See a copious extract from Fleury's *Eccles. Hist.* in Jortin's *Remarks*, vol. v, p. 72-181, wherein the cardinal does not scruple to make this confession.

human eye ever beheld—were plausibly ascribable to no other cause than the monstrous corruptions and delusions of popery.

Setting aside the protestant prejudices of our historian, it was natural for him to think of the evils which he saw around him, and which were to be traced to the same cause. He knew, too, that the reigning monarch was secretly hostile to the established religion; the heir presumptive anti-christ himself; and both the brothers, to their eternal disgrace, disposed to have recourse to the Roman catholic powers for supplies of men and arms in the prosecution of designs which, if successful, might again render England tributary to the holy see. Under such circumstances, when we review the facts and the persons by whom he was surrounded, and these persons, also, environed by a rampart of sovereigns leagued against the pure faith of England, it is not in the least wonderful that Burnett, fully aware of the real aim and object of the Roman court, ever to grasp at the ascendant, should manifest the most deep-rooted abhorrence of it, and fill so many of his pages with dismal forebodings of the wide-spreading increase of popery. In those days, indeed, few would have deemed the opinion an aberration from the mark of truth, that the complexion of the events and transactions then passing before them argued more for the extinction than for the durability of protestantism, and the confirmation of British liberty. Swift, however, who never misses an ironical stroke at Burnett (for he so hated this prelate as always to treat him, says Dr. Johnson, like one whom he is glad of an opportunity to insult), ridicules his pious fears of the Roman see again establishing its pretensions to spiritual sway in these kingdoms, by representing him as a person "who can smell popery at five hundred miles distance better than fanaticism just under his nose."^{*}

^{*} See a Preface to the Bishop of Sarum's introduction, vol. iv, p. 340, *Swift's Works*, edited by Walter Scott. If the "witty dean," instead of giving vent to his sarcastic humour at our historian's frequent and hasty repetitions of his prefaces and introductions, had fairly attacked those parts in them which were open to just censure—for example, had he pointed out when the bishop had formed a wrong or precipitate judgment of the labours of his predecessors—his remarks would then have been well worth our serious attention. John Fox, "famous to posterity," says Strype, "for his immense labours in his *Acts and Monuments*," four editions of which, huge folios, were published in the reign of Elizabeth, and which embody a mass of original matter amply illustrative of our civil and ecclesiastical history; a work which is a complete picture of the era it represents, and that may be almost said to confirm the history of the Reformation, is alluded to by Burnett in

Possibly our annalist, from his frequent gazing upon the religious horizon, may have at last grown dizzy, and by the workings of his fears transformed the dark spots he had really discovered there, into frightful and giant shapes. But, however the Bishop's tirades against popery may have served to multiply the points of irritation between the Roman catholics and protestants, still we ought, in justice to him, to remember that auricular confession, priestly absolution, and the sacrifice of the mass, were then making great progress in England; that an union with the Gallican church had been proposed by Lesley, a distinguished nonjuror and staunch defender of divine right; that Dr. Hickes, the Coryphæus of the Jacobite church party, had maintained, without any reservation or qualification, that there was a proper sacrifice in the Eucharist; that Dr. Brett had published a sermon on the doctrine of priestly absolution as essential to salvation; and that some episcopalian writers, who manifested an excessive predilection towards political servility, had spoken disparagingly of the Re-

terms which must be displeasing to those who are conversant with the pages of our good martyrologist. His reference to Hall, who must have afforded him lights for which in vain he would have looked elsewhere, is also made in these disparaging words:—"Hall was but a superficial writer, and was more careful to get full information of the clothes that were worn at the interviews of princes, justs, tournaments, and great solemnities, than about the counsels or secret transactions of the times he lived in." Bishop Nicholson, too, in his *Historical Library*, p. 71, reiterates the same sentiment. "If the reader desires to know what sort of clothes were worn in each king's reign, and how the fashions altered, this is an historian [speaking of Hall] for his purpose; but in other matters his information is not so valuable." But both these learned prelates have fallen into great error, through oversight or negligence, in thus characterizing the writings of the honest chronicler; for beyond doubt or contradiction we are mainly indebted to this full and accurate reporter of fact, for all that we know as to the internal history of England during the reigns of Henry VII and Henry VIII. Imperfect indeed would have been our insight into the different rebellions and insurrections under Henry VII, or our acquaintance with the refractory spirit evinced by the citizens and commons to the arbitrary exactions of Wolsey, if we could not have consulted the writings of Hall. This willing partizan of the rights of the people—for we descry his attachment to them when he observes, upon the glaring scheme of usurpation practised by Henry, or his ministry, in attempting to levy money without an act of Parliament, that they (the people) "said, if men should give their goodes by a comission, then wer it worse than the taxes of Fraunce, and so England should be bond, and not free"—is conjectured to have been born about the last year of the fifteenth century. A lawyer by profession, he became a sergeant, and was likewise a member of Parliament, an office which was then an object of little ambition. He died in 1548.—See Chalmers' *Biog. Dict.*

formation, or at least of the manner in which it was brought about, choosing to call it a destruction, not a reform, of the church establishment. From these several circumstances, the reader will determine for himself what reason there was for the very name of popery lighting up a passionate aversion in the bosom of Burnett, and how far his opinions, in all that relates to this subject, were taken up without examination, and continued without justice.

But, however the Bishop may be accused of drawing the corruptions of popery with an exaggerating hand, yet, with all his protestant feelings and prejudices, he does not shut his eyes to the direful animosities to which the Reformation gave rise, not only among the promoters of the new learning and the maintainers of the ancient discipline, but between the different denominations of the reformed religion. Painful as it was to him to contemplate the sad inconsistencies of human reason, he shrinks not from showing how far an admirable and enlightened reformation was carried on by the aids of persecution; he does not attempt to hood-wink his readers to the melancholy fact of both foreign and English reformers demanding liberty of conscience for themselves, yet refusing to grant it to others —proclaiming to all Christendom the sacred rights of free inquiry and private judgment, yet each erecting a little popery of their own in their respective communions, where, in cases of dissent, they who professed to hate persecution, yet justified the exertion of temporal punishment, and the infliction of bodily tortures, and death;* so that,

* The protestant Servetus was put to death by the protestant Calvin; and the mild Melancthon spoke here the language of a sanguinary fanatic, when he declared that Servetus deserved to have his bowels pulled out and his body torn to pieces. The persecutions of protestants by protestants, as they are detailed by Chandler in his *History of Persecution*, may be designated a savage conspiracy against the written and unwritten rights of mankind. When Melancthon says, "Tuo judicio prorsus assentior. Affirmo etiam vestro magistratus juste fecisse quod hominem blasphemum, re ordine judicata interfecerunt," he in these words delivered the sentiments of the German reformers. It is a well-known fact that the Swiss churches recommended the punishment of Servetus in formal letters. Nor are proofs wanting that some of our English divines were forward in testifying their approval on this occasion. But though the concurrence of these different bodies of men can never absolve Calvin from the heinous offence of having outrageously violated all the principles of reason, justice, and humanity, we must not forget that something more than grave blame is imputable to Servetus for provoking the feelings of the Christian church to the highest degree, by calling the Trinity "*triceps monstrum, et Cerberum quindum tripartitum*," and other revolting names. We can hardly, however, bring ourselves to believe that

for a time, our forefathers were delivered from one thralldom only to be subject to another. The truth is, that, with very few exceptions, the age of the Reformation was an age of mutual persecution. The only great man across whose mind floated the beautiful vision of toleration, was Sir Thomas More; but he may be said to have discarded such fancies as so many pernicious fooleries, when he flogged the Templar Bainham in his garden at Chelsea, and when afterwards he stood by on his being racked in the Tower. It would, however, have increased the reputation of Burnett for the wisdom of the practical maxims which he occasionally derives from the events passing before him, if he had shown that, from the first establishment of Christianity down to the era of the Reformation, the principles of toleration had never been rightly understood; and that our reformers had so widely mistaken this matter as to forget that it was not lawful for them to attack each other with any other sword than "the sword of the Spirit, which is the word of God:" yet intolerance, unhappily as it may have effected their personal conduct, found no place in the Liturgy and Articles of our church.

Of a work which has had the unexampled honour of receiving the thanks of both Houses of Parliament,* and of being translated into

the audacious impugner of the Christian verities would have been delivered up to the secular arm to be committed to the flames, notwithstanding all his blasphemies, if it had not formed such a leading feature in the policy of the reformers to guard, by acts as well as arguments, against the much-dreaded charge that their separation from the Romish church implied the heretical violation of the catholic faith. Nothing can be juster here than the remark of Bishop Warburton. "The other reformers, such as Luther, Calvin, and their followers, understood so little in what true charity consists, that they carried with them into the reformed churches that very spirit of persecution which had driven them from the church of Rome."—See Notes on "Essay on Criticism," in *Pope's Works*, vol. i, p. 222.

* In the journal of the House of Commons, 3rd December, 1680, there is this entry, "Ordered that the thanks of this House be given to Dr Burnett for his book entitled *The History of the Reformation of the Church of England*." And in the journal of the House of Lords, 3rd January, 1680, "Thanks were ordered to be given to the Rev. Dr. Burnett for the great service rendered by him to this kingdom, and to the protestant religion, in writing the *History of the Reformation* so truly and exactly; and that he be desired to proceed in the perfecting what he further intends therein with all convenient speed. And it is further ordered that the said Dr. Burnett be, and is hereby recommended to the Lords the Bishops for some ecclesiastical preferment." We suppose the bishops thought that what was the business of all was not the business of any; for preferment he had none from this recommendation. In these times, parliament goes right to the crown, which answers better.

most of the European languages, that praise may be deemed meagre which is not excessive. But, however true may be the observation that this work is a powerful antidote against popery, and that it forms the most solid basis of the author's fame, yet even they who are disposed to rate it as the best history we then possessed in our language, will be far from deeming Burnett a writer whose taste is always correct, whose style is always noble, and in every respect suited to the majesty of history.

He who describes striking characters and most important events—and there are few periods in the annals of modern history illustrated by a greater variety of them, and by more exalted talents and virtues, than the reigns which Burnett has recorded; he who sits in judgment upon emperors, kings, pontiffs, prelates, and statesmen, ought not to be constantly stepping aside from his proper track to follow the antiquary and memoir-writer in their minute details. But if he does appear in their walks, his entrance should be marked by an attitude neither mean, nor ungraceful, nor uninteresting. The microscopic observer will discover more than one little spot where Burnett's notions as to the perfections of historical painting will be thought very jejune, when he can select, as a fit circumstance to be transmitted to future generations, that the infamous Bishop Bonner delighted in the taste of pears and puddings.*

Now, it is natural to expect that what elevates the mind of man will not debase his language. In the relation of great actions we have a right to look for an elevated tone of diction. In the pages under review, there is a homeliness in many of the expressions which often borders upon vulgarity, and but ill accords with our ideas of him who contemplates the downfall of hierarchies. Not that there is a

* It should seem, however, that Burnett thought that a touch of this kind heightened the effect of the picture, and almost placed the man which it portrays before our eyes; for he thus answers Dr. Hickes, who had commented very sharply on his noticing the foregoing particularity:—"He is angry for my taking notice of Bonner's writing to his friends for puddings and pears. I must desire you to observe his ingenuity in this; since my reflections did not fall on these words of Bonner, but on his adding that if his friends would not furnish him with them, he would give them to the devil, and to all the devils. Now this, from a bishop in affliction, writing to his private friends, shewed a strange kind of brutish levity, and the observing of that was not below the majesty of history, as Bonner acted so great a part during the whole time that I write upon: such a stroke as this, in my poor opinion, ought not to have been suppressed."—See the Bishop of Sarum's letter to the Bishop of Lichfield and Coventry.

necessity always for the same set of words, or for the same cadence, lest the gravity and dignity of the historical style should be violated. But to any, even the least competent judge, it must be manifest that, though the annalist may be naked and defective in all the minor graces and elegances of phraseology, yet he may use plain words to express strong sensations, without descending to such expressions as "all fair above board," "the big-bellied* queen," "Henry the postilion of the Reformation," &c.

Neither are the Bishop's narrative powers of the highest order. For an apt selection of details we shall often look in vain. There is a disposition to dwell upon circumstances with a painful minuteness, which shows the writer to have been as incapable of combining a vast group of actions, motives, and events—of fixing upon those features which are the most strikingly attractive—as of enriching his subject by political or historical disquisitions. In vain, also, do we look for those graphic descriptions which may be expected from the pen of him who, drawing his narrative from those contemporary documents which render the annals of nations picturesque and characteristic, can give to his scenes (if he be at all able to paint with a master's hand) that close resemblance to reality which makes us, as it were, eye-witnesses of the transactions he records. We, therefore, miss in this performance that romantic attraction, if we may so call it, by which the reader is invited to a repeated perusal. In a *History of the Reformation of the Church of England*, it is also natural to expect that the progress, character, and effects, of the Reformation would be always kept in sight, that such a work would rather regard religious than secular affairs.

Now, some will, doubtless, think that Burnett fairly stands charged with the reproach of contemplating that ever-memorable event more under the latter than the former aspect—that he has not sufficiently regarded human events in subserviency to Divine Providence. It might, indeed, have been naturally expected from Bur-

* Mr. Custance bestows a severe and, indeed, excessive censure on the second chapter of the *History of the Reformation*, when he assigns the following reason "for writing that interesting portion of our history, that it contained so many exceptional passages as rendered it unfit for juvenile reading."—*Popular Survey of the Reformation*, Lond. 1813, p. 14. No doubt Burnett has written some passages which would now be deemed coarse and indelicate. But a more fair and less fastidious critic would have felt that allowance must be made for old writers. The mode in which our historian speaks of Anne Boleyn's pregnancy was not considered as low and vulgar in his time, however it might be so in the extreme in an author of the present day.

nett's fervid and exalted piety—from one so uniformly earnest in his devotional feelings—that he would have pointedly described Cranmer as a blessed instrument in the hands of a gracious Providence for the introduction and advancement of the great work of the Reformation in these realms; that he would have pressed upon the notice of his readers Cranmer's unlooked-for visit to Waltham, as affording a strong—we would almost add, an overpowering—evidence of a special interposing Providence; for assuredly there is nothing weak or superstitious in believing that in the leading epochs of human affairs the hand of an Almighty Contriver is plainly discernible. Had this sentiment been more frequently inscribed on the pages of Burnett, "It is the Lord's doing, and it is marvellous in our eyes;" had it been more intimately incorporated in the narrative, when speaking of our religious reformation; had he viewed its establishment less with reference to human than divine agency;* we have no hesitation in asserting that those persons who conceive, and among them are to be found men of the profoundest intellect, that Providence, from first to last, superintended the development and consolidation of our Reformation, would, instead of accusing him of a mistaken zeal, been more disposed to consider his work as a monument of wisdom than they do now from the omission of such a course of reasoning. In a word, it should be broadly and manifestly the design of the historian of that great moral and religious revolution, always to recognize the workings of Divine Providence in it, that the reader may have no occasional misgivings of his writing more like a worldly-minded politician than a well-instructed Christian. This apology, however, may be fairly offered for Burnett's large digressions on the civil history, not only of England, but of Europe at large, that from the influence which state politics then exercised on ecclesiastical affairs, the latter is almost unintelligible without a frequent reference to the former: for, as Priestley justly observes, in his encomium on this history, "Never were the affairs of the church and state so intimately connected as during that period."†

In making these remarks, and in presuming to think that the excellencies of the performance are not always upon a scale commensurate with the magnitude of the subject, we are sensible that we should

* "The Reformation," says a pious writer, "will ever be considered as a great event in the divine dispensation by all true members of the Church of Christ, to the end of time."—Dr. Buchanan's *Three Eras of Light*.

† *Lectures on History*, p. 209.

convey a very inadequate conception of Burnett's character as a writer of history, if we omitted to observe that his unwearied efforts and industry in ransacking archives, collating manuscripts, collecting records and charters highly curious and interesting in themselves, and almost entirely untouched by former writers, qualified him to treat his subject in a fuller and more authentic manner than any of his predecessors, while, of course, this laborious examination and patient comparison of authorities and documents, enhance the credit and value of the work.* It were also a culpable omission not

* To modern eyes, the following exclamation may sound offensive to good taste, but it is very accordant with the spirit and habits of the man. Indeed, it may be almost excused in any writer, when repelling a violent attack upon the accuracy of his researches, the fidelity and honesty of his opinions. "What, he to be accused of gross ignorance and wilful falsehood, that rummaged all the most considerable libraries of the kingdom to fetch out registers and authorities, records and acts and copies of despatches, memoirs and other manuscripts of the times, out of which to compose his history, who has printed a volume in folio of those sort of pieces, in justification of what he says—he to whom the nation and the parliament itself gave public testimony of the esteem which they had of his book?" &c.—See a Letter to Mons. le Grand, on his *History of Henry VIII. with a plain Vindication of the same*.—Dr. G. B. Bishop Nicholson has passed this high encomium on the general fidelity and exactness of Burnett's *History*:—"The defects of Peter Heylin's *History of the Reformation* are abundantly supplied in our author's more complete history. He gives a punctual account of all the affairs of the Reformation, from its beginning in the reign of Henry VIII. to its final establishment under Queen Elizabeth, A.D. 1559; and the whole is penned with a masculine style, such as becomes an historian, and is the property of this writer in all his writings. The collection of records which he gives at the end of each volume are good vouchers of the truth of what he delivers in the body of the history, and are much more perfect than could reasonably be expected after the pains taken, in Queen Mary's days, to suppress every thing that carried the marks of the Reformation upon it."—p. 74. Bishop Kennett thus pointedly alludes to this most useful undertaking:—"I confess I have often wondered how there ever came in a party within our own church, who made it their business and their pleasure to degrade those admirable volumes of the *History of the Reformation*, as if they were afraid or unwilling our church should be justified in her separating from the Romish church."—See *Register and Chronicle, Civil and Ecclesiastical*, Lond. 1728, fol. p. 36. Foreign writers, also, of the most opposite religious and political opinions, have pronounced that Burnett has produced one of the most important historical works of which modern English literature has to boast, and have commended him especially for observing a strict impartiality in many instances where it might be supposed that his bias in favour of certain persons and parties would have disqualified him from performing that important and difficult duty.—See the *Bibliothèque Univer-*

to say that his general views are accurate and sound, far above the standard of the times in which he lived,* and sometimes marked by comprehensive profoundness and originality; that he is an honest reciter of facts, though with certain political and religious biases,† that he has, for the most part, judiciously treated contemporaneous evidence, whenever it could be obtained, as deserving more attention than non-contemporaneous; and that, though his style makes but a distant approach to the perfection of historical composition, he has the talent of communicating his information with distinctness, perspicuity, and fulness, and occasionally of imparting his reflections with dignity and impressive eloquence. These are no ordinary merits; and hence these volumes have been long regarded as a permanent addition to the wealth of English literature.

Now, whether the inveterate prejudices and opposition Burnett

note, tom. v, for the year 1687, p. 530, and the *Acta Eruditorum*, Leipsic, 1687, p. 58-9.

* We would refer for instance to his very sensible and liberal remarks on the statutes against usury, or lending money on interest, vol. ii, p. 260. The authority of Aristotle, who loudly condemns usury on the principle that money is in its nature barren (vide *ILLUSTRA.* A ζ, p. 2-3.), or, as our Shakespeare has it, "a breed of barren metal," was implicitly bowed to by the fathers of the church, and echoed by all our learned ecclesiastics after the Reformation. Isaac Walton, the well-known biographer of Bishop Saunderson, tells us that "the good bishop would not take money on interest, yet he would give £100. on condition of receiving £20. for seven years." Admirable casuist as this prelate was, yet I think it would have puzzled him not a little if to his nine cases of conscience he had been required to add a tenth, which should point out in what the difference consisted between those two modes of procedure. In the epistles of Calvin there is an allusion to usury, which exhibits an uncommonly enlightened exemption from the prejudices of mankind on this much-disputed topic. The whole passage is too long to quote, but the following sentence will show that the Genevan reformer set at naught the decisions of the church against that practice. "Nunc igitur concludo, judicandum de Usuris esse, non ex particulari aliquo Scripturæ loco, sed tantum ex æquitatis regula."—*Epistola*.

† We are inclined to think that the following observation of the bishop, in his *Reflections on the "Ecclesiastical History" of Mons. Varillas*, will be thought, by many of his critical readers, as applicable to the delineation of some of the most figuring personages in the *History of the Reformation*, as well as in the *History of his Own Time*. "An historian who favours his own side is to be forgiven, though he puts a little too much life in his colours, when he sets out the best side of his party and the worst side of those from whom he differs; and if he but slightly touches the failures of his friends, and severely aggravates those of the other side, though in this he departs from the laws of an exact historian, yet this vice is so natural that, though it lessen the credit of the writer, yet it doth not blacken him."

had to contend against were owing to the circumstances of his being a *foreigner*, the invidious name by which a Scotsman was then designated, or to that independence of mind which, scorning to seek preferment by any mean practices of sycophancy or servility, dared to walk in a path of its own, regardless whether it led to honour or neglect; from one or other of these causes, there was a very powerful effort put forth to stifle his undertaking at the outset. In these liberal and enlightened times (for here these terms may be applied with the strictest propriety), when the precious memorials of past ages, deposited in large and costly libraries, are so easily accessible to our perusal that they may be almost called the general property of the learned, the following epistle cannot be read without surprise, mixed with the strongest indignation, by all those who generously sympathize in the common cause of letters.

For the worthy, honoured Sir John Cotton, Bart., these.

Honoured Sir,

Perceiving by Mr. Burnett (whom I lately met with), that he expects you at your house in Westminster soon after Christmase, and intends to come to you for search of what you have, in order to his purposed *Historie of the Reformation*, I thought fit to let you know that some of our most eminent bishops and orthodox clergy, hearing thereof, do not think him a competent person for such a worke, being a *Scotsman*, as though none of our *English* divines were sufficient for such an undertaking. Besides, we playnly see, by his *Historie of the Duke Hamilton*, how he is byast; for he lays the foundation of the late execrable rebellion totally upon the bishops. I am, therefore, advised to intreat you that when he makes his address to you concerning this business, you will tell him that you are, and shall be, willing to promote any good worke, but this being of weighty consideration, and he *no Englishman*,* you think it expedient to advise with some of our chiefest bishops therein.

* That cold, heavy, though erudite Hearne, who would have anathematized Burnett and his writings if his power had been commensurate with his malice, has endeavoured to excite a similar prejudice against his *History*, on the same grounds. He calls him, in his *Leland. Collect.* "a foreign writer of our Reformation," vol. iv, p. 56, and in the preface, vol. i, p. xxvi, he styles him a man "in alia gente natus," and "in rebus Anglicanis peregrinus fere atque hospes."

Sir, the high honour I beare to you made me thus bold to trouble you about this matter. Praying, therefore, for your good health. I rest,

Your most obliged Servant,

Herald's Office, London,

WILLIAM DUGDALE.*

20th December, 1677.

Every able man is conscious of his own efficiency ; and Burnett had too much confidence in his powers to be induced, by any obstacles of this kind, to relinquish his design. Admitting, however, that his modesty of deportment might have diminished with the growth of his celebrity, and that, therefore, his character might provoke resentment and encourage prejudices,† there is something so monstrous in

* "Communicated to me by the Rev. Dr. Tunstall. Wednesday, Nov. 13th, 1754."—Tho. Birch, *Lansdowne MSS.*

† Were we to lay any stress upon the satirical effusions of the day upon Burnett, we should be tempted to regard him as one who conceived that his learning, in point of civil and ecclesiastical history, was so superior to any of his contemporaries, that he stood in that respect, according to his own imagination, like Saul in the assembly of the Jews, higher from his shoulders upwards than any of his people, and therefore disdained all literary assistance whatever, come from what quarter it would. To those, indeed, who acquiesce in the averments of Swift, Scott, Sewell, and Bevil Higgons, and believe the bishop to be what they would fain make him, the most self-opinionated of mortals, the following extracts will have their redeeming traits of modesty in them.

For the most honoured Doctor Bolase, at Chester.

Most honoured Sir,

This dales carrier brings you downe 2nd part (sic M S.) of my *History* to which you contributed so considerable an assistance that I am sure it deserved both a higher acknowledgment than you will find I have made for it, in my book, and a greater return than so poor a present; but you are so kind, and have obliged me by so many waies, will, I hope, read *what* I have written with so favourable a censure, that if you except to any thing in it you will so far oblige me as to let me know it; and that you will alwaies look on me as one that you have, by many great favours, bound to live and die, dear Sir,

Your most humble and most obliged servant,

G. BURNETT.

(Sloane, MSS. 1008, original). The reader will find, also, in the third vol. of the *History of the Reform.* a very grateful allusion to the Rev. Thomas Baker, the erudite antiquary at Cambridge, for the literary services rendered

the disproportion between the offence and the punishment, that it is difficult to believe that, without some dark over-ruling agency, the learned author of the *Monasticon* could have voluntarily forfeited his own respectability and reputation by making so unheard of a request as the one couched in his singularly discreditable letter. That part of it where Dugdale alludes to a chief bishop having possessed him with prejudices against Burnett, as being no friend to the prerogative of the crown, or the constitution of the church, the inference is clear to the mind of the latter that Archbishop Sancroft was the originator of the impediment just mentioned.

Yet, from a late view of the character, temper, and writings, of this eminent prelate, in a work peculiarly valuable from the impartial tone in which it is written, we must believe that Sancroft had too much of the real saint in his disposition, was too mild and amiable, and too sincere a promoter of religion, to be betrayed into an act which would have reflected indelible disgrace on his name. That something, however, like a slippery and shuffling movement, is to be detected in the archbishop's attempts to prevent the consecration of Burnett in his appointment to a bishopric, is evident from the following statement, which shows the grounds that led our historian to speak of his ecclesiastical superior, in the *History of his Own Time*, with a nearer approach to acrimony than may be justifiable. But that he was the instrument of obstructing the formation of an historical work that promised solid and enduring excellence, is a charge not, without the strongest evidence, to be fastened on one who knew how to honour merit, both in his enemies and friends.

to Burnett—services which he afterwards nobly rewarded with a pension. The modest spirit, too, of the following letter to Sir William Dugdale, answered by queries on his part, in that bristling tone of defiance, like one disposed to tilt at another in a sort of tourney of intellect, and from which it may reasonably be suspected that garter king at arms was not disposed to conciliate the man whom he had wronged, is another proof how completely overcharged in expression are the conclusions of the above-mentioned writers respecting Burnett's conceit and self-sufficiency.

SIR,—I most humbly thank you for the great favour you have done me in sending me the enclosed remarks, which I return back to you, with the answer which I have writ to your queries. I desire nothing so much as to find out truth, and shall be very ready to confesse my mistakes as oft as any shall discover them to me. I doe esteem myselfe, in a very particular manner, bound ever to continue, Sir,

Your most humble and obliged servant,
G. BURNETT.

Burnett thus describes the behaviour of Sancroft to him upon his promotion to the mitre :—When his election to the bishopric of Sarum was returned and confirmed, the precept of consecration went, of course, to Archbishop Sancroft, who said that he would not obey it. Some bishops tried to persuade him, but in vain. The Earl of Nottingham tried ; but succeeded no better. The party, says the Bishop, got it among them, that he had promised them not to do it. But as the time came on, and he saw that he must be sued in a *præsumptio*, when this was tried before him, he all of a sudden ordered two commissions to be drawn, both of which he signed and sealed, and both are yet extant : one, directed to the Archbishop of York, and all the bishops of England ; the other, to the Bishop of London, and all the bishops of the province, to execute his metropolitanical authority during his pleasure. This last was made use of, and, pursuant to it, the doctor was consecrated, so that this was as much the archbishop's own act as if he himself had consecrated him. His vicar general produced this commission, and was present at his consecration ; and all the fees were paid to his officers ; for care was taken to receive them. " Here is only half of the story," says the bishop ; " a blacker scene follows. It seems, the party complained of this, and he, to give them some satisfaction, sent by Mr. Wharton a message (unless he went in his name without his order) to Mr. Tillet, the registrar, to send him that commission. It was sent and withdrawn. This was not only the violating of registers, but it was a plain robbing me of that writing upon which the canonicalness of my own consecration, and my legal right to this bishopric, was founded. By telling this, I am far from wishing to lay any hard character on the memory of that archbishop. I look upon it as an effect of the injustice and violence of the party, by which he might be carried too easily to some thoughts against his own mind. Thus it continued till many months after his death, when notice was given to the bishop of it by me, who had occasion to know it.—Upon enquiring he found it to be true, and took advice of it upon oath ; and, to prove the tenor of the commission, the bishop gave notice of his design to Mr. Tillet, and let him know, that if he did not recover that commission between that time and Michaelmas Term, he would sue him in Chancery, in order to the discovery of the matter. " He best knew," continued the bishop, " how he bestirred himself upon this occasion. The commission was brought back to him, but by whom I have never made it my business to enquire." When these aggravating circumstances are impartially compared together, it can hardly be denied that Burnett had weighty

reasons for regarding the archbishop as ready to wound, yet afraid to strike*—as willing to gratify his personal pique or dislike at the expense of candour and justice.

With respect, however, to the opposition encountered to the work which he was to bequeath to posterity as a lasting memorial of his industry and genius, our own conviction is that it sprang from the Duke of York and the popish party. Few historical facts are now better established than that the overthrow of the protestant hierarchy was the darling project of this infatuated† prince, although we should have conceived, from its roots having struck so deep in the very centre of the state, that he must have been convinced the difficulties he had to struggle with would be insurmountable. Any thing, therefore, which tended to thwart this chimerical hope, this unconstitutional desire (and what could be more effective for this purpose than a full and authentic exposition of the errors and corruptions of popery?), was sure to create in James extreme irritation and uneasiness. Now, Burnett he experimentally knew to be too impracticable‡ to be awed into submission, and too wise to be the dupe of his political wiles. No way, therefore, presented itself to the theological despotism of James, half so easy and certain to nip this undertaking in the bud, as to cause it to be insinuated, in those ambiguous terms by which "more is meant than meets the ear," that Burnett was disqualified by his prejudices and passions for the task he meditated. These insinuations, we might suppose, coming from the heir presumptive to the throne, had the desired effect upon the mind of garter king at arms, a high tory both in church¶ and

* Although it is evident that the name of our author is quite hateful to the primate—see the *Familiar Letters of Dr. William Sancroft*, Lond. 1767, p. 32—yet there is something very offensive to good taste in Burnett's want of propriety of diction whenever he has occasion to introduce the name of the archbishop. The prelates of his own party he always mentions by their proper titles. But Sancroft is the only title with which he honours him. This is downright vulgarity, spite, and malevolence.

† "After the business was ended, in a familiar discourse, the king declared to this father that he would either convert England, or die a martyr; and that he had rather die to-morrow, that conversion wrought, than reign fifty years, without that, in happiness and prosperity."—See *A Letter from a Jesuit at Liege to a Jesuit at Friburg*, giving an account of the happy progress of religion in England, 1687—8, February 2nd.

‡ See Burnett's account of an interview (*History of his Own Time*, vol. v, p. 177) to which he was invited by James, when Duke of York, evidently with the purpose of gaining him to his party.

¶ Archdeacon Grenville, in a letter to Dugdale, is pleased to compliment

state by principle, gratitude, and interest; for without an assumption of this kind it is difficult to furnish a clue to so extraordinary an event in the literary history of these times.

But if the reader should be inclined to think that the duke, or his party, made no direct or indirect attempt to discountenance Burnett's project,* we should still be loath to believe, that there could be found in Sancroft that union of rancorous activity, of persecuting bigotry, and dull torpor of pedantic bad taste, to have done so, however positively it may be asserted by Antony Wood† that the arch-

him with the title of "the champion of the Common Prayer Book among the laity."—See Hamper's *Life of Sir William Dugdale*, p. 431.

* "The Duke of York did put on his agents, Duke Lauderdale and Sir John Cotton, particularly to mar the goodly design of Dr. Burnett which he had in penning his noted work on the *History of the Reformation*."—*A Scratch against Popery and the Duke of York*, p. 3. In the second volume of the *History of his Own Time*, p. 66, the bishop refers to their unity of design against his literary project; but there is not the slightest allusion to James pursuing that object through these indirect and tortuous courses. In one of the *Observators*, a paper to which it is well known Burnett was a contributor, he complains of this imbecile despot having acted in the manner mentioned. Soon after James became acquainted with Burnett, he seems to have contracted a dislike towards him, which in the end blazed forth into perfect hatred. The following extracts from the correspondence between James and the Prince of Orange will show the determined hostility to the bishop, and what dread the former entertained of his religious and political counsels. In one of the letters, dated Nov. 23rd, 1686, at which period our historian was an exile in Holland, the royal bigot represents him as a man not to be trusted, and an ill-man. In December 7th, 1686, he complains of the doctor as "a dangerous man, though he would seem to be an angel of light." The princess, in her answer, Hague, December 28th, 1686, endeavours to vindicate him to her father; but on July 28th, 1687, the king desires that his daughter "will not let him come to her chapel." If arguments drawn from the general principles of our nature are to be taken for data, I am greatly disposed to think that these documents will materially tend to confirm the assertion of James's sinister design to discourage or suppress the *History of the Reformation*.

† See *Life of A. Wood*, written by himself. Dr. Kennett thus refers to this appointment:—"The king was under some difficulty to find a proper successor on the death of Archbishop Sheldon; but at last, through the recommendation of his brother, the Duke of York, he resolved upon Dr. Sancroft, Dean of St. Paul, as a person of great prudence and moderation. "But in matters of this nature," says Dr. D'Oyley, "it is seldom possible to attain a correct knowledge of the truth; for it rarely happens that recommendations which are made in the interior of a royal closet are disclosed truly to the public."—*Life of Sancroft*, vol. i, p. 151—152. There can be no doubt, generally speaking, that we see but very imperfectly the little capricious fluctu-

bishop chiefly owed his elevation to the primacy to the then powerful interest of the Duke of York ; a circumstance which rendered the supposition more probable with some, that he would willingly connive at the duke's wish of frustrating the prosecution of the *History of the Reformation*. But, however the archbishop's natural indecision of temper may have produced a vacillating species of conduct towards Burnett, it is a thing not easily to be credited, that he would have allowed either his well-known dislike to our historian, or the weight of his obligations to his patron, to lead him to an act as derogatory to his character as to his high station.

That a very unjustifiable opposition was raised against the undertaking of Burnett, is a fact which cannot be denied or sufficiently reprobated. Yet, although his production took immediate hold of public favour and of public confidence—an event which he has perhaps too ostentatiously set forth in his numerous prefaces and introductions*—it as soon became the object of repeated and severe animadversion. Bishops, tory clergymen, nonjurors, and laymen, successively laboured to demolish a monument, in honour of the Reformation, which the voice of Parliament had pronounced to be a

ations, or fits of admiration or dislike, which have so often influenced the higher appointments both in church and state, and therefore have need for better expounders than we can summon to our aid, to explain satisfactorily the true cause of them. But surely, in the present instance, we may receive for a fact the assertion of Wood, that the real motive for placing Sancroft on the archiepiscopal throne, was to exclude Compton, Bishop of London, from that situation, and who was so obnoxious to the Duke and the popish party. Now all this seems fit and proper, and in the due order of things. While human nature continues what it is, parties, like individuals, will not scruple to seek their own aggrandizement as far as may be consistent with prudence, nay, a great deal farther. Compton had, at that time, so much distinguished himself by his love of civil and religious freedom, as to acquire the name of the *protestant bishop*. The duke, therefore, thought, wisely enough, that the former prelate would be more easily brought to serve the purposes of arbitrary power than the latter, and consequently recommended him for the primacy. Nor did he find out his mistake till Sancroft refused to read the noted declaration for liberty of conscience. The effectual and righteous stand then made showed that the new metropolitan was quite as ready to fight the battle of the constitution as the dreaded Compton. In alluding to Sancroft's conduct upon this occasion, we cannot but observe that his name would have shone brighter in the page of history had not its lustre been afterwards dimmed by laying the foundation-stone of one of the most fatal schisms in the Anglican church.

* "For the purpose of attracting and interesting the public in the history, we have no less," says the author of the *Speculum Sarisburianum*, "than three new ones in about one year's time."

suitable one. Out of the number of these attacks, we will select those, in which the writers make the greatest parade of their own learning, and reproach Burnett for his ignorance with all the arrogance of self-assured superiority; and afterwards we will address ourselves to the task of pointing out in what instances we conceive he has afforded specimens of oversight and negligence: where his favourable affections are improperly turned; where he has not called together all the contemporaneous evidence in explaining interesting facts; and where his claims to a commendable impartiality may be fairly questioned, though we shall assume the critical office with very opposite feelings to those who were ever ready to deny the long and laborious course of eminent usefulness which marks the days of this truly pious and erudite prelate.

There can be little doubt that, had not our historian avowed, with the greatest frankness, the mistakes he had occasionally fallen into,*

* "I did, in my second volume, publish a commission to Cromwell, thinking it was that which constituted him the king's vicegerent, which I, in reading the beginning of it, took to be so; but this was one of the effects of the haste in which I wrote that work."—See *Hist. of the Reform.* vol. i, p. 286.—Specimens, however, of this haste, are not merely confined to the body of the work itself, but are likewise to be traced in the supplement. There is a striking instance of it in speaking of the convocation of the year 1543. "We have," he says, alluding to this assembly, "only this *short word*, that on the 29th of April the archbishop treated of the Sacraments, and on the next day on the article of free will. This is all I could gather from the copy of the minutes of the convocation." Now Wilkins has printed these minutes in his *Concilia Magnæ Britanniae*, vol. iii, p. 868; and whoever will consult them may discover that Burnett can only have glanced his eyes over these interesting documents, a fact which will appear as clear from the following statement. On the 20th of April the exposition of the Lord's Prayer in English was discussed; on the 21st, that of the five first of the commandments; on the 24th and 25th, that of the remaining five, with another of the sacraments, and not on the 29th, according to the assertion of the bishop; on the 27th, that of the word faith, of the twelve articles of faith, of justification, works and prayer for the dead; and on the 30th that of the article of free will, upon which latter day the primate thus alludes to the strenuous labours of the commissioners to promote the best interests of their country. "Quo die lectus et publice expositus in vulgari Articulus liberi Arbitrii tradidit Reverendissimus Prolocutori: eo animo, ut ipse eundem tractatum coram Praelatis inferioris Domûs perlegeret. Quem lectum restituerunt superiori Domui cum hæ approbatione quòd pro catholicis et religiosis eos acceptarunt; necnon gratias ingentes patribus egerunt quòd tantos labores, sudores, et vigilas religionis et reipublicæ causâ, et unitatis gratiâ, sublevarunt." Other instances of inaccuracy have been noticed by Archbishop Laurence, in the notes to his *Bampton Lectures*, p. 190, and by Mr. Todd, p. 6, note to his *Declaration of our Reformers*. In apology for these errors, it

his work would considerably suffer in the estimation of the judicious from the opportunity which those mistakes gave to his adversaries of raising a hue and cry against him, as a falsifier of facts and opinions. Nothing operated as so powerful an antidote to such attacks as the candour of his own declaration. A contemporary author has alluded to this feature of his character in the following words: "I cannot but exceedingly commend his ingenuity in acknowledging, and gladly amending, some errors in his former part; in doing which he has very satisfactorily cleared his reputation as an historian, it being the assured argument of sincere innocence to own himself once guilty, and the best sign that the will retains no inclination to a fault which it voluntarily discovers and makes such full satisfaction for."

Nevertheless that diligent student of history and antiquities, Henry Wharton, who, under the fictitious name of Antony Harmer, hurled his javelin of criticism against our author, is not disposed to pronounce so merciful a judgment. With him there is no tolerance for the slightest mistakes of this literary ornament of the age. But the learning of Wharton, who fell an early victim to his studiousness, was ill-digested, and his conclusions were often rash. The impulse of a disputatious mind, or another motive far less excusable,* produced this volume of sneer and sarcasm, before he had duly

has been said that such was Burnett's rapidity of composition that, after having collected and arranged the materials of his second volume, he was ready for the press in the short space of six weeks. A fact furnishing, no doubt, a striking proof of what the natural powers of the mind will accomplish, when seconded by persevering industry; but not, perhaps, quite satisfactory to those critical readers who, while they are willing to applaud him for the vast body of information brought to light by his single-handed strength, yet, in order that the voluminous pile might be well put together in all its parts, would require something more of the searching spirit of modern investigation—something more of a notarial strictness in the large masses of manuscripts and books he had to look over and examine.

* We are told by Burnett that he was at one time earnestly importuned by Wharton to use his influence with Archbishop Tillotson for a prebendal stall at Canterbury. But the request, though enforced with all possible zeal and sincerity on the part of Burnett, not proving successful, the angry and disappointed candidate revenged himself upon the *History of the Reformation*, under the plea that its author had not merely been lukewarm in his cause, but had gone the unjustifiable length of secretly prejudicing Tillotson against him and his pretensions.—See *Hist. of the Reform.* introd. p. xxvi-vii. It has been made a topic of reproach against our historian, by Swift and Sewell, that he should have put forth this declaration after his adversary's death. Wharton, however, has deliberately recorded the motives which urged him

weighed and examined his facts and authorities ; and where he is most successful in playing off his reputation against Burnett he struts, if we are to believe a contemporary writer, in borrowed* plumage. That he possessed great knowledge of the times before the Reformation is candidly admitted by Burnett himself ; and his deep reading and patient industry there are employed, it must be confessed, to the purpose, in the following charge which he prefers against him. The bishop has observed that " there is in the rolls an *inseximus* of King Edgar's erecting the priory and convent of Worcester, which bears date anno 964, Edgar VI or St. Innocent's day, signed by the king, the queen, the archbishop, five bishops, six abbots, but neither bishop, see, nor abbey are named, nor dukes and five knights ; but there is no seal to it." Now as the *inseximus* is the recital of the instrument only, Burnett, if he had been skilled in archæologic lore, would have known that no seal is to be found accompanying such a document. Moreover, in Edgar's time seals were not affixed to charters, an assertion in which we are supported by the authorities of the most learned antiquaries. The earliest royal seal affixed to a charter, at least of which we have any knowledge, being that of King Edward the Confessor.

to attack the *History of the Reformation* ; and after the following passage no one will hesitate to admit that Burnett's accusations *were ill founded*. "Die Octobris, Historiam Reformationis Anglicanæ a Burneto scriptam evolvere cepi, eo animo ut defectus et errores ejus notarem ac demum evulgarem. Quod facere statui, tum ut nimiam ejus, quæ in damnum Ecclesiæ abusus est, famam convellerem ; tum ut Historiæ nostræ Ecclesiasticæ errores receptos posteris indicarem ; tum ut animo meo multis ab eo injuriis irritato nonnihil indulgerem." In other parts, also, of this curious piece of autobiography, published by Dr. D'Oyley, there is striking evidence how deeply these principles were rooted in Wharton's heart. It would appear, indeed, from other facts, that his moral excellencies did not keep pace with his literary ones, since a heavier accusation could scarcely be brought against a man than is contained in the following sentence :—"At Mr. Geary's I chanced to see Mr. Wharton's book of the *Historia Literaria*, wherein I found several notes blotted out, which was about a year before he died. The notes that are added are highly injurious to me, and afford one of the most unaccountable instances of unfair and disingenuous dealing that perhaps ever passed among men of letters."—See Dr. Cave's letter to Archbishop Tension respecting W. Wharton in D'Oyley's *Life of Sancroft*, vol. ii, p. 165.

* Battely, the editor of Somers' *Antiquities of Canterbury*, has this remark in a letter to Strype, the historian. "Of the *History of the Reformation*, he (Mr. Wharton) had made some few animadversions in his *Historia de Episcopis Londinensibus*, in the 'Life of Bonner.' Of those which he published he was beholden to me for the greatest part."—July 9th, 1695, p. 445.

The reader shall now see in what manner Wharton exposes the ignorance of his fellow-workman in the mine of antiquity. "Had this historian been acquainted with our English antiquities, he would have known that this very charter hath been often and long since published in the *Monasticon*, in *Spelman's Council*, and elsewhere, and would not have imagined himself to have discovered some rare secret in this *inspeximus*. Or if he had been acquainted with our rolls he would not have expected to find in an *inspeximus* the seal of an original charter enrolled in it; or if he had been conversant with ancient records and charters made before the Norman times, he would have spared his observation of the want of a seal to this charter (although he had seen the original charter and observed this in it), and of the not naming either bishopric or abbey therein. For they who know this to be the case of the far greater part of the instruments and charters of their times, would no more have made such an observation than, after having said that they had seen a man named Titius, they would have added that he had a nose to his face."

In speaking of the revered martyr Ridley, our historian observes that "he, as himself writes in one of his letters, was named to be Bishop of Duresme, being one of the natives of that country, but it never took effect;"* upon which his adversary, ever ready to deny him the praise of accurate and laborious research, thus exultingly accuses him of being guilty of misrepresentation. "It so far took effect that Ridley was actually translated from London to Durham; for in the instrument of the restitution of Bonner to the see of London, in the beginning of Queen Mary's reign, it is alleged that the see of London was then void by the removal of Ridley to Durham, made by King Edward after the deprivation of Tonstal; and Bonner was, therefore, reinstated in London, pronouncing Ridley deprived of the see of London; but, on the contrary, Ridley is, in the register, declared to have been deprived of the bishopric of Durham for heresie and sedition." It is not fair to try the author of a long and laborious history by a few insulated mistakes of dates and facts; and upon them to ground a charge, as Wharton has done, of general bad faith and perverted judgment. He evinces, indeed, like Swift, a festive delight in seizing upon every thing that can vilify the man or depreciate his work; and therefore the biographer, as it were a personal friend of Burnett, rejoices in giving the reader the following specimen of Wharton's own inaccuracy in

* *Hist. of the Reform.* vol. i, p. 38.

statement of fact. He observes that "whereas David Pole is said, by the historian, to have been preferred at Peterborough, one of the poorest of the bishoprics, in truth, Peterborough was at that time none of the last bishoprics in England, having been endowed by King Henry far above any of the newly-erected bishoprics, and so continued until Scambler, the successor of this David Pole, did by a simoniacal contract convey away the better part of the possessions of it to a noble person of the neighbourhood ; that he might make way for his own translation to the see of Norwich, to do the like mischief there." Now the fact is far otherwise, according to the following assertion of White, Bishop of Peterborough. "Scambler says he resigned a good part of his bishopric *into the queen's hands*, for the Lord Burghley got it, or, as his family asserts, bought it. He resigned the manors of Thirley and Walton in Lincolnshire, with the manor of Southorpe in Northamptonshire, and at Tambolt with the lordship of the loake of Peterborough, and had in exchange for it £84. per annum fee, farme rent ; *but it does not appear there was any symoniacal contract about it.* Scambler had formerly been chaplain to Lord Burghley, and by his means had been preferred at Peterborough."—THOMAS PETERBOROUGH.*

In the peroration of Wharton's critical volume, nothing can more strikingly illustrate the malignity with which the whole is composed than the following passage, in which there is an exaggerated view taken from the bishop's mistakes in fact or induction, mixed up with a great deal of spite and empty insult ; for while Wharton pretends to have pointed out, in the gentlest manner imaginable, the positive defects and errors in the ecclesiastical portions of the history, he artfully strives to bring the whole work into disrepute, by representing it as a very easy task to detect similar blunders and errors in the civil parts of it, could he prevail upon himself to make the obnoxious experiment. "We were sufficiently able to defend the justice of the Reformation before any *foreigner* undertook to deliver the history of it, and shall be so still, if the reputation of his history should suffer any diminution. Lest it should be imagined that I have examined this history so curiously as to have discovered all the errors and defects of it, and to have left no room to after diligence and inquiry of others, I do protest that I never formed any design of this nature until about a month since ; I have noted what my memory and present collections suggested to me. But it may be easily observed that I have considered only that part of the history which is purely

* *Lansdowne MSS.* fol. 490.

ecclesiastical, and not all that. If any one should take the pains to examine in like manner the civil history intermixed therewith, it may be feared that not a few errors and defects may be discovered in that part of it."

Now Burnett felt that his antagonist's name stood too high in repute in the learned world to be disregarded, however he may have disgraced it on this occasion. Accordingly, he noticed Wharton's strictures in a letter addressed to the Bishop of Lichfield and Coventry. And if, after the perusal of this epistle, any will deny him the character of a candid and high-principled man, actuated in the composition of his history by one uniform and constant spirit of moral and religious truth, and that he was urged to this vindication of it by nothing so much as that honest indignation against imputed guilt, which is the last thing extinguishable in a virtuous mind; we shall set them down as incapable of appreciating the dignity and independence of conscious integrity, and as chargeable with the most disingenuous misrepresentation. But the bishop shall speak for himself; for those relations are commonly of most value, as Dr. Johnson justly observes, "in which the writer tells his own story."

"As to the charge of falsehood that comes over so often, 'tis plain, by his frequent repeating of it, that he intended it should stick, I can and do affirm it to my knowledge, I did not willingly mistake or misrepresent, nor so much as suppress any one particular relating to that great transaction. If I was called upon to say this with the greatest solemnities of religion, upon oath, or at the sacrament, I am sure I could do it with a good conscience, I have also sent for Mr. Angus, of St. Dunstan, who was then my amanuensis, not having leisure and opportunities at present to enter into the detail of small matters, and have asked him if he can imagine how there can be so many mistakes about dates in the transcribing of the records; for this author scarce allows one of them to be true, and therefore he thinks better credit is due to the history; and that the records will be of little value if once there appears just reason to suspect the care or the fidelity of the transcriber; and assures he the reader that 'of those dates which he has examined, he has found near as many to be false as true.' Mr. Angus was amazed at this, and said he was ready to take his oath upon it that, though he himself used his utmost diligence to examine every paper that he copied out, yet I was never satisfied with that, but examined all over again myself; so that I may sincerely say what I once writ on a very solemn occasion, at the making of my will, when I went out of England, that I writ that work with the same fidelity as I should

give an evidence upon oath in a court of judicature. If a man is to write memoirs he must keep close to his vouchers ; but where he writes an history of such consequence, and that was transacted long before his own time, and that it is visible that many of the most valuable papers relating to it are lost, but that enough remains to give him a right view of the whole and a clue to guide him in it, he may certainly find many hints of things which, since he cannot lay them before his readers as historical facts, he may and ought to suggest them as probabilities ; and he who forms a true character of a man from his secret prayers, can frame judgments and see likelihoods that could never come in the way of one who only reads his work, but does not dwell so long upon it, nor turn it so much in his thoughts as himself has done ; and yet offering of these may be necessary, since they may be of use to let his reader see further than he would do without them. Only I wish that, when he writes next, he may do it in a better spirit and in a decenter style. He who knows so much cannot judge so ill as not to see that the attacking a man's reputation, but especially a bishop, in so great a point as that of his truth and fidelity, upon success of which all his labour, and the credit of his whole life and ministry, does depend, is not a slight thing, and is not to be attempted unless one is very well assured that what he objects is not only just in itself, but that it is incumbent on him to do it. The fame of a man is a most valuable thing ; and the rules of charity, and against detraction and slander, are delivered in such weighty strains in the New Testament, that it is no small matter to make so bold with them."

The other formidable opponent to whom we have alluded was the fierce and implacable nonjuror, Jeremy Collier. His *Ecclesiastical History of Great Britain* has deservedly obtained for him a high literary reputation. Too much praise cannot be bestowed on his indefatigable labour in procuring the large mass of documents and authorities from which he made his digest. But his Romanizing, high-church principles, weaken the effect of his narrative. The second volume of this performance, under the guise of history, is so purely controversial that, in fairness, we may say, with Burnett, that, "it is an artful attempt, from the beginning to the end of it, to palliate the corruptions of popery, to blacken the character of those confessors and martyrs who never slackened their glorious efforts till they had procured its overthrow, and to vilify and insult the names of Edward and Elizabeth, not heaitating even to accuse the latter of being the author of more mischief to her church than her sister Mary." Collier, indeed, had all the qualifications of a

first-rate controvertist ; he was learned, acute, and pertinacious, quick to suspect and still quicker to condemn, fearless to assert and slow to retract,* and bent upon hunting down his prey in every form with the staunchness of a bloodhound. But, presuming to write before he had read to any other purpose than to adopt every historical evidence which favoured his own conclusions, the consequence is that, although his objections are delivered with an air of triumph and confidence, as if unanswerable, they really are so brittle as to fall to pieces upon the first handling. It would be tedious to examine all the particular facts which he would contradict, but we will notice a few, in order to prove that his articles of impeachment are productive of no other effect than that of setting Burnett's fidelity and accuracy in a more conspicuous light.

The first place in which Collier overshoots the mark is, an alleged mistake as to a matter of fact. Burnett had asserted that parents teaching the Lord's prayer, the ten commandments, and the creed in the vulgar tongue, was crime enough to bring them to the stake. And for this piece of information, we are told by Collier that "Burnett quotes no other authority than the martyrologist Fox, who only authenticates what he affirms by the testimony of one Mother Hall." But if we turn to the pages of that venerable writer, who so diligently laboured in collecting records of ecclesiastical antiquity, it will there be found that Bishop Longland is transcribed to prove that several were delated for teaching and learning

* As a proof of this assertion, take the following passage from a pamphlet entitled *A Specimen of the Gross Errors in the second volume of Mr. Collier's "Ecclesiastical History,"* being a vindication of the right reverend and learned Dr. Gilbert Burnett, late Bishop of Sarum, from the several reflections made on him and his *History of the Reformation*, in the several places as it is noted in a late advertisement in the *Evening Post*, p. 42. "In order to show that Burnett is a falsifier of history, and not to be credited in any thing, he (Collier) writes that the two first editions of the *Ordinal* made in King Edward's reign, printed with privilege by Grafton and Whitchurch, have none of the different rites mentioned by this gentleman. That these were the two first editions he now owns himself convinced ; but still he can't or wo'n't believe his lordship that the first *Ordinal* printed by Richard Grafton, the king's printer, in the month of March, 1549, cum privilegio ad imprimendum solum, had any of the different rites mentioned by his lordship, till, by the favour of a gentleman uncommonly well furnished with curiosities of the press, that he had got a sight of, and he then says that, upon perusal, he finds the Bible laid upon the bishop's neck, the pastoral staff put in his hand, and the chalice, with bread in it for the priest, some of the consecrating and ordinary ceremonies ; but not the least attempt to recal his censure, or to ask pardon for his partial and unreasonable mistrust of the bishop."

the ten commandments, pater noster, ave Maria, and the creed, in English; and were forced to abjure their doing so, to save their liberty. Now surely this abjuration were unnecessary, if their learning the ten commandments in English involved in itself no crime. Collier does not presume to assert that any authorized translation of the decalogue into English then existed. True it is, that the Evangelic or Gospel Doctor—for that was the distinguished appellation given to the renowned John Wiclif^a by his contemporaries—had appeared as a glorious benefactor to his species, by translating the Bible into our vernacular idiom;† yet the Scriptures, thus opened by him, were only to become again a fountain sealed and a spring shut up, since, by a constitution of Archbishop Arundel, prefaced by the declaration that it is a perilous thing, as St. Jerome testifieth, to translate the text of Holy Scripture from one idiom into another, it was enacted and ordained that thenceforth no one should translate any text of Sacred Scripture, by his own authority, into the English or any other tongue, in the way of book, tract, or treatise; and that no publication of this sort composed in the time of John Wiclif, or since, or thereafter, to be composed, should be read, either in part or in whole, either in public or in private, under the pain of the greater excommunication, until such translation should be approved by the diocesan of the place, or, if the matter should require it, by a provincial council: every one who should act in con-

* Mr. Baber, in the prefatory memoir to his valuable reprint of our pro-reformer's *Translation of the New Testament*, informs us that his name has been spelt in sixteen different ways. One of his recent biographers, Mr. Vaughan, chooses the name of de Wycliff, which he derives from the village where he was born, in the northern district of Yorkshire; and he adds, that, in documents prior to that cited by Mr. Baber, y appears, in almost every instance, in the first syllable, and ff in the second. Mr. Le Bass, however, in his powerfully written volume of the life of this great teacher of the truth, deems it "expedient to adopt that orthography of the name which has the smallest number of letters," and, therefore, after this high authority, much as it may offend some antiquarian eyes, we write the name as above.

† We learn from Sir Thomas More "that the whole byble was, long before Wiclif's days, by virtuous and well-learned men, translated into the English tong, and by good and godly people, with devotion and soberness, wel and reverently red."—*Dialog*, iii, p. 14. But of these versions, could any of them be read at this day in our churches; as that of Wiclif's might, and even his translation, from an excessive desire to render it strictly literal, is frequently obscure to those who are not conversant with the idiom of the latin. Upon this point, see Lewis's *Life of Wiclif*, p. 121; and *History of English Translations*, by the same author, p. 22.

tradition to this order to be punished as an abettor of heresy and error. The persecutions which followed this decree of the convocation held at St. Paul's in 1408, are strikingly attested by the various episcopal registers. But such was the gross spiritual ignorance of the British population in those days that the pontificate, however it might be shorn of its pristine strength, still wielded the sword of dominion with such force and severity, that it was beyond the reach of a man gifted with powers short of omnipotence to diffuse any thing like a spirit of general disaffection to its edicts.

As to what Collier adds respecting the tenets of Wiclif and the Lollards being similar, there is historical proof that this is not the fact. It may be conceded that the said Archbishop Arundel, in reference to the spread of his doctrines, affirms that "Oxford was as a vine that brought forth wild and sour grapes, which, being eaten by the fathers, the teeth of the children were set on edge; so that the whole province of Canterbury was tainted with novel and damnable Lollardism, to the intolerable and notorious scandal of the university." It may also be stated that the most inveterate of his adversaries, Henry Knighton, fathers upon Wiclif this maxim: that civil magistrates forfeited the right to govern by the commission of any mortal sin. But calumny and invective, at all times, are wretched substitutes for historical truth; and truth it is, that a sentiment so absurd, and so injurious to the good order of society, never formed a part of that learned and enlightened man's* political or religious creed, whatever may have been the opinions of his poor priests or travelling preachers. Rash and unguarded as may have been some of the expressions of the precursors of the Reformation, yet it is a thing not credible that the university seal should have been affixed to a document declaratory of "the great learning and good life of John

* That many opinions which he lays down and defends would receive the welcome support of the most orthodox protestant, there can be no question. But candour obliges us, at the same time, to observe, that some of the notions of this illustrious man, if taken in their full import and bearing, tend to an undue disparagement of the church and of the civil power. For example, that tythes were mere alms—that oaths were unlawful—that church endowments in perpetuity may be resumed by the patron, or sovereign—that dominion, or the right to property, was founded in grace, or the persons being in the acceptance of God. These dangerous novelties, this excess of ardour for sweeping innovations, which would break down all the fences of subordination, evidently betray more of the puritan spirit, than of the sober reformer, whose plan of action is accommodated to the real state of man. The several opinions of Wiclif, collected from his works, are to be found in Baber's life of him, p. 32.

Wiclif," if he could have put forth or countenanced an opinion which has such manifest tendency to subvert all legal authority.

It can hardly fail to strike a well-informed reader that it is intentionally to misrepresent Burnett to make him refer to the reign of King Edgar for the settlement of the monks in England; whereas Burnett only refers to this period for the commencement of the increase of that order. "From the days of King Edgar," says he, "the state of monkery had been still growing in England." The time when the monks became a scandal to religion, and an outrage to decency, from the dissoluteness of their morals, and from their expensive and joyous mode of living, is specifically applied by Burnett to the period when they were settled in most of the cathedrals of England, and were possessed of the best church benefices; a period which any one conversant in our ecclesiastical annals well knows was long after the days of King Edgar.

When Collier tells us that "the bishop's remark won't hold, of suffragans being put down by degrees from the ninth century," we have another proof of his wilful perversion of Burnett's meaning; for to imagine the historian of the Reformation, who pored over so many quartos and folios upon episcopal government in the different ages of the church, ignorant of that of which any one who has acquired the slightest tincture of ecclesiastical history must be aware, is alike inconsistent with truth and probability. It were, indeed, to divest Burnett of all acquaintance even with what may be called the elements of theological learning, to suspect him not to have known that in England, down to the era of the Reformation, our bishops had deputies, whom they denominated their suffragans,* and who had been consecrated bishops of sees in *partibus infidelium*. These, however, differ materially from the *Choroepiscopi* spoken of by Burnett, whose order was abolished, both in the east and west, before the end of the tenth century.

* The pretext assigned for consecrating six and twenty suffragans in the reign of Henry was, the frequent employment of bishops in foreign embassies, or in offices of the court. To these spiritual functionaries was delegated the power, in the absence of the diocesan, of consecrating churches and churchyards, conferring orders, confirming children, and other episcopal functions. But as, in these enlightened times, learning and intelligence are not confined to ecclesiastics, so the startling anomaly of clerical statesmen no longer exists to offend alike the eye of religion and reason. It is a mistake to imagine, as some writers have, that their functions ceased in our church at the period of 1688.—See *Edin. Miscell.* 1692, p. 12. For Dr. Brett tells us, in a letter of his, in *Drake's History of Yorkshire*, that the last of these bishops died in 1776.

The bishop is railed at by his captious adversary for misrepresenting "the universities, clergy, and religious," because he charges them with hostility to the Reformation. But we are at a loss to discover much difference between his own sentiments and those of Collier on this point; since the latter admits that "the leading churchmen thought all innovations dangerous, and that the fundamentals of religion suffer this way."

It would surprise those who have been accustomed to contemplate Bonner as the willing instrument of Mary's cruelties to her protestant subjects, to find that he was friendly* to the Reformation when he took out the king's commission for his bishopric. Collier, however, would have us believe that Burnett disparages this passionate and unprincipled prelate in the following passage:—"Now Bonner began to show his nature. Hitherto he had acted another part. For being most extremely desirous of preferment he had complied with Cromwell and Cranmer, so that they had great confidence in him." The name alone of Bonner is apt to call forth such revolting ideas of cruelty and bloodshed, if the united testimony of our historians in the sixteenth century have not marvellously misrepresented him, that Collier's notion of his ever being, in reality and in truth, well affected to the Reformation, is like stepping in quicksand, and as devoid of all foundation as another statement, which he maintained in opposition to Burnett, that Cromwell died a Roman catholic. That this opinion is not the result of careful investigation, but is taken up without sufficient evidence, we think, may be fully attested from the expressions in the prayer which, as quoted by Fox, he uttered at the hour of death. "I see, and know, that there is in myself no hope of salvation, but all my confidence, hope, and trust, is in thy merciful goodness. I have no merits, nor good works, which I may allege before thee; of sins and evil works, alas! I see a great heap. But yet, through thy mercy, I trust to be in the number of them, to whom thou wilt not impute their sins; but wilt take, and accept, me for

* He had been raised to the archdeaconry of Leicester by the former, and appointed the master of the faculties by the latter. And had, even during his residence at Paris, where he was sent to supersede Gardiner as ambassador to the French Court, made a great show of zeal about an impression of an English Bible and Testament which was then preparing there.—See Wordsworth, *Eccles. Biog.* vol. ii, p. 361—364. But during this year (1539) "he hateth," says an old writer, "the new light."—*Lansdowne MSS.* "He there began to speak of the Reformation as the Lancashire parson did of the English communion, that it was the most devilish work that ever was devised."—*Strype's Eccles. Mem.* vol. ii, chap. 2.

righteous and just ; and to be the inheritor of everlasting life. Thou, merciful Lord, was born for my sake ; thou didst suffer both hunger and thirst for my sake ; thou didst teach, pray, and fast for my sake ; all thy holy actions and works thou wroughtest for my sake ; thou sufferedst most grievous pains and torments for my sake ; finally, thou gavest thy most precious body, and thy blood to be shed on the cross, for my sake. Now, most merciful Saviour, let all these things profit me, that thou freely hast done for me ; which hast given thyself also for me. Let thy blood cleanse, and wash away, the spots and foulness of my sins. Let thy righteousness hide and cover my unrighteousness. Let the merits of thy passion and bloodshedding be satisfaction for my sins. Give me, Lord, thy grace, that the faith of my salvation in thy blood waver not in me, but may ever be firm and constant."* These words demonstrate no Pelagian confidence of human merit, no clinging to the tenet, held by every individual of the church of Rome, that fallen man is both capable of preparing himself for the reception of grace, and of deserving it by his own virtue ; but a recognition of the grand doctrine of justification by faith, asserted by our church, that "we are accounted righteous before God for the merit of our Lord and Saviour Jesus Christ by faith, and not for our own works and deserving ;" and therefore assuredly the seeds of protestantism† were sown in Cromwell's heart.

Every age has its generation of hypercritics, who, in any casual observations, fancy themselves able to discover some refinements hidden from common eyes, esoteric doctrines, concealed meanings,

* Hall says "then made he his prayer, which was long, but not so long as both godly and learned."—Edit. 1548. p. And in another place this chronicler remarks, "he was a man that, in all his doings, seemed not to favor any kynde of popery." It is not very likely, then, that he should have closed his eventful life in the character of a papist.

† It is a sufficient answer, to those who have fallen into such absurdity and paradox as to deny the vicegerent's attachment "to the new learning," to observe that, when the impression of the whole Bible in English was completed, under the patronage of Cranmer, known by the title of "*Matthew's Bible*"—though this name was unquestionably fictitious, the translation being partly executed by Tyndale and partly by Coverdale, Cromwell took upon himself to present a copy of this bible to Henry, and to obtain the king's leave for its sale and diffusion ; upon which the archbishop thus writes to the minister :—"Your lordships shall have a perpetual laud and memory of all them that be now, or hereafter shall be, God's faithful people, and favourers of his word. And this deed you shall hear of at the great day, when all things shall be opened and made manifest."—*Strype's Cranmer*, b. 1, chap. 15.

accessible only to the initiated ; and that Collier belonged to this class is an inference which may be fairly deduced from the passage which we shall now quote. Burnett affirmed that "the authority of the privy council had been raised so high by the celebrated statute of the 31st of Henry VIII, cap. 8, that they were empowered sufficiently for displacing the lord chancellor, or putting him out of office ;" to which the erudite nonjuror replies that "if the privy council had no other warrant to support their proceedings than this act, 'tis pretty plain they exceeded their authority, as the statute relates only to proclamations, and it is expressly provided, that the words, meaning, and intent of this act be not misunderstood, and that by virtue of it any of the king's liege people, so should have any of his or her inheritances, lawful possessions, *offices*, privileges, franchises, goods or chattels, taken from them ;" which word *office*, Collier says, "brings the lord chancellor's case fully within the saving of the statute." As if, after the statute was framed, the king by his councils (for the king and his council are to be regarded in the same relation to each other as the king and the two houses of parliament stand at present, the supreme legislative authority having been lodged, from the time of the conquest, not in the king alone, but in the king and the great council conjointly) could not deprive a lord chancellor of his office, to which no colour of right was ever set up, to justify the charge that it was hereditary.

Now the office of high constable was hereditary ; and Collier may be considered to have as much put aside the weight of argument and authority in his anomalous novelty respecting the office of chancellor, as if he had asserted that the king, by the advice of his council, committed an illegal act when he ordered the head of Edward, Duke of Buckingham, the then high constable, to be cut off, on the charge of high treason. Collier, too, seems quite to have forgotten, in his eagerness to convict Burnett of inaccuracy in his facts and reasoning, that this memorable statute or ordinance* of Henry gave the king's proclamation, to a certain extent, the force of an act of parliament, though long before it had been a settled point that no proclamation

* Some of our lawyers maintain, that broad lines of distinction are to be found between these two terms. Whitelocke, whose legal acquirements were qualified, not only to discuss, but to settle, this knotty point, has observed, "If there be any difference between an ordinance and a statute, as some have collected, it is but only this, that an ordinance is but temporary, till confirmed and made perpetual, and so have some ordinances also been."—See *Parliamentary Writ*. vol ii, p. 297.

was valid against them. At what period the jurisdiction of the council or star chamber* fell into disuetude, is a circumstance encumbered with some doubt. So early as the reign of Edward III. the parliament denounced its jurisdiction as contrary to Magna Charta and the known laws, and often directed to serve the most criminal views of ambition and avarice, sometimes in the clergy, and sometimes in the monarch, to whose iniquitous views it was made necessary. From all this being done, we are not surprised that under Richard II. it became the policy of the Commons to check and modify the extraordinary powers of the council, which at last, under the Lancastrian kings, was in some degree accomplished; and about that period, perhaps, the concilium ordinarium, the king's ordinary council, began to assume the forms of the concilium secretum, or privy council of state. But to suppose, with Collier, that the latter body, which, under the Tudors, so often potently interfered to deprive the subject, to his grievous discontent, of that most precious of rights, the trial by peers, could not remove a lord chancellor from his office, on the ground of its being hereditary, is plainly to form a very erroneous judgment on this question.

Those who are conversant with our early parliamentary constitution, and who recollect by what slow degrees the fabric of English liberty was reared, and for how long a period parliaments were used for no other purposes than as efficient and willing instruments in car-

* Blackstone, in alluding to the origin of the star chamber, specifies those abuses and oppressions connected with it, which so justly made it the object of hatred to the subject. "The star chamber was a court of very ancient original, but new modelled by statutes 3^d Hen. vii, ch. i, and 21^o Hen. viii, ch. 20, consisting of divers lords, spiritual and temporal, being privy councillors, together with two judges of the courts of common law, without the intervention of any jury. Their jurisdiction extended legally over riots, perjury, misbehaviour of sheriffs, and other notorious misdemeanors, contrary to the laws of the land. Yet this was afterwards, as Lord Clarendon informs us, stretched to the asserting of all proclamations and orders of state; to the vindicating of illegal commissions, and grants of monopolies; holding for honourable that which pleased, and for just that which profited, and becoming both a court of law to determine civil rights, and a court of revenue to enrich the treasury: the (privy) council table, by proclamations, enjoining to the people that which was not enjoined by the laws, and prohibiting that which was not prohibited; and the star chamber, which consisted of the same persons in different rooms, censuring the breach and disobedience to those proclamations by very great fines, imprisonments, and corporal severities; so that any disrespect to any acts of state, or to the persons of statesmen, was in no time more penal, and the foundations of right never more in danger to be destroyed."—*Commentaries*, vol. iv, chap. 19.

rying the royal prerogative to the most despotic height, will pause before they acquiesce with Collier in regarding the following passage as a foul aspersion upon the purity and independence of the honourable House of Commons. "Gardiner, at that time the prime minister, had beforehand prepared them (the commons) by giving the most considerable of them pensions;" an assertion so far from being contrary to fact that it is indirectly confirmed by an observation of Heylin on the parliament of Edward VI. that "the cards were so well packed by Sir Ralph Sadler that there was no need of any other shuffling till the end of the game." It must strike almost every impartial reader as a most unconscientious contempt of truth and justice, on the part of Collier, to accuse the bishop of falsifying history, because he says that "one Beale informs us that, in many places of the country, men were chosen for Queen Mary's parliament by force and by threats; when this angry polemic could not but have seen, in such well-known books as Fox and Heylin, that it is there set forth that one John Hales made the same declaration in an oration before Queen Elizabeth." It would be tedious to rehearse the other specimens of Collier's acrimonious hostility against the historian of the Reformation. They are, for the most part, equally founded on misrepresentations and mistakes; the whole attack thus furnishing a lamentable proof of the sorcery of party spirit, which conjectures without modesty, judges without lenity, and defames without scruple.

M.R.S.L.

(To be continued in the next number.)

SKETCH OF THE STATE OF LITERATURE AND EDUCATION IN DENMARK,*

PREVIOUSLY TO THE SIXTEENTH CENTURY; .

WITH NOTES AND ILLUSTRATIONS.

THE Icelandic is the source of all the northern poetry: the Icelandic tongue once prevailed in Denmark, Sweden and Norway: it is the language of the Scaldic tales,† of the Saga legends, and of the Runic inscriptions. There came a time, however, when this sister of the German dialect, this queen of the Scandinavian regions, gradually abandoned the land over which she reigned without a rival, and retired to the school of Skalholt,‡ like a recluse carrying

* Mr. X. Marmier made a Report on this interesting subject to "*Le Ministre de l'Instruction Publique*," at Paris: it was dated at Copenhagen, January, 1838, and published in the "*Revue des Deux Mondes*," p. 507-522, for the February following.

† In the *Scaldatal*, or list of the *Scalds* of Denmark, Sweden and Norway, no less than two hundred and nine names are enumerated. This list is inserted in Snorro Sturleson's *Heimskringla*, or *Chronica Regum Septentrionalium seu Norvegorum*, danicè versa, a Petro Claudii pastore quondam Undalino primario, denuo in multorum gratiam revisa, continuata et prelo subjecta; 4to, *Hafnia*, 1633. It also has a place in the Dissertation of Olaus Wormius de *Priscâ Danorum Poësi* which is appended to his *Literatura Danica antiquissima*, vulgò Gothica dicta; 4to, *Hafnia*, 1636, et folio, Ib. 1661. The same curious document is preserved by N. P. Sibbern in his *Bibliotheca Historica Dano-Norvegica, sive de scriptoribus rerum Dano-Norvegarum commentarius historico-literarius*: 8vo, Hamburg, 1716. The *saga legends*, to the number of thirty-eight, are preserved in the poetic *Edda* of Sæmundr the Sage, who was a native of Odde in Iceland, and afterwards priest of that parish. He was descended of a noble origin, and died in A.D. mcccxxxiii: his life was long, laborious and useful, and his memory is cherished by the Icelanders with extraordinary veneration.

‡ Naddod a naval adventurer was driven on the coast of Iceland in the year mcccLxi, by a storm; and, in consequence of this incident, he discovered an island which, in A.D. mcccLxxv, furnished an asylum for the noblest families in Norway; which afterwards became a venerable seat of learning, where the songs and tales of the North were faithfully preserved; and which, for the long space of three centuries, continued to be a hallowed retreat of freedom and philosophy. While the island was yet being peopled, Skalholt rose to be its metropolitan city, and long enjoyed a high distinction as a sanctuary of education.

into his rural retreat the poetic fictions and "reminiscences" of his youth. Denmark was led thus to change the Scandinavian idiom, by her vicinity to Germany, and by intercourse with other people; and, of all the branches sprung from the same original language, the Danish has undergone the greatest alterations. In different parts of the kingdom, in Zealand, in Jutland, according to the differences of position and the diversity of external relations, the particular dialects arose which afterwards yielded to the Zealandic, in the same way as those of the several provinces in Germany were superseded by the "High German." From the day when this separation from Iceland became manifest, when the subjects of the kings of Roeskild, the inhabitants of Ripen and Odensee, began to speak a language which their brethren in Iceland did not understand, from that day commences the history of Danish literature.

In its early development, this Language was languid and slow. It must be closely traced through many ages, before the light breath of its vitality can be distinguished, the whispering of its tremulous voice can be understood. Whilst the young muse of the Middle Age awoke, amid the orange-groves of Provence and the oak-forests of Normandy; whilst, on either bank of the Loire, were heard the plaintive lays of the love-tale alternating with the lore of moral minstrelsy; whilst the spirit of poetry extended from clime to clime, penetrating into the warrior's dwelling-place and the priest's abode; whilst the minstrels, the "*minnesingers*,"* the Castilian bards with

* The first poetry—the *Provençal* or *Limosin*—among the European vernacular languages, was formed on either side of the Pyrenean mountains, near the delightful domains of the Arabs, the imaginative creators of chivalry. Sonnets, canzonets, tenzonets, idyls, villanescas, sirventes, madrigals and other forms of metrical composition, invented for witty questions and dialogues and envelopes for amorous epistles, gave occasion for a singular tribunal—the *corte de amor*—wherein ladies and knights, princes and kings, were concerned as parties and judges. Before this court, the "*Gaya Ciencia*," the science of the troubadours, was originally established, as a pursuit of the higher nobility; but, on its afterwards falling into the hands of *contadores* and *truhanes* and *bufones*, the story-tellers and jesters and court-buffoons, it became despised, neglected, inexistant. In the days of its early flourishing, the Provençal poetry had a softly harmonious and pathetic style which tended to refine the language and to polish the manners of its votaries. As has been said, it was the general parent of all modern European poetry: that of Spain, France and Italy, arose as its daughters: by it, Petrarch was tutored; and of it, he was emulous: the *Minnesingers* of Germany were its remote and harsh echoes, though the softest of her language is unquestionably theirs. Like other modes of minstrelsy, however, it ultimately degenerated: with the vagrant *jongleurs* of France and the vagabond *meistersingers*

their sonorous harmonies, and the Italian poets with their soul-dissolving effusions, were everywhere listened to with extravagant admiration; whilst imagination and melody received the homage of other lands, all in Denmark was darksome and silent. During this slumber of the intellect, never a poetic song uprose, save that of the Scalds, composed in an obsolete tongue, and appertaining to a departed age. When Christianity had dispersed the fictions of a pagan theogony, modern language had not yet passed from its infancy, and the Danish people found themselves placed between the wrecks of their ancient religion and the incomplete structure of the new, between an established tongue that was disappearing, and an unformed language which they could not use. They were incapable of discerning a poetic element, and of creating the means of social improvement. Besides, they were entirely occupied with mere animal pursuits, to the exclusion of intellectual exercises. Warfare, piracy and traffic, were cherished by the resolute Danes for their poetry; and to them, occupations of this sort constituted the fountain of glory, the mainspring of life and exertion. This daring people despised every thing that tended to divert them from the scenes of an adventurous existence, and they reposed with a perfect serenity of soul in their ignorance and barbarism.

In studying the history of a nation's literature, the mind naturally suffers itself to be captivated by the splendour of brilliant epochs and the haloes of illustrious names. Nevertheless, there is a peculiar charm in descending from eminences visible to the ken of all beholders, to examine the intermediate spaces, and in stepping aside to retrace the humble foot-path that joins the highway, or the unheeded well-spring that oozes in droplets from a rock of granite, to become a mighty stream. Generally, there exists a correlative accordance between the favourite pursuits of man, during his vigorous manhood, and the direction given to them in the prime of his days. Such an accordance, also, has place in literature. With a view to know the "genius of humanity," we ought not only to scrutinize it in its epochs of glory, but likewise in those of its infancy and earliest effort. The former display its powers; the latter exhibit its perseverance. The former are brilliant as the noon-day sun in his full refulgence; the latter resemble the beams of

of Germany, the Lore of Love and Chivalry sunk into a despicable trade.—*Outlines of a Philosophy of the History of Man*; translated from the German of John Godfrey Herder, by T. Churchill; 4to, London, 1800; Book XX, Chapter 11, p. 608-9.

morning over-veiled with clouds or obscured with mists, before it gradually shines forth effulgent, and disperses the darkness and the fogs with its energies of life and light.

Let us, then, endeavour to investigate the origin of Letters in Denmark, without being discouraged by their rude beginnings, their unsteady progress, their protracted obstructions. The inquiry will conduct us to true science, to genuine poetry.

Denmark, during the ninth, tenth and eleventh centuries, still remained a pagan country. Charlemagne, after having converted the fierce Saxon tribes to a profession of Christianity, more by the power of his sword than by persuasion, at last conceived the project of carrying his "evangelical" conquests beyond the Elbe. Death, however, prevented him from accomplishing his design; but, by Louis le Debonnaire, the scheme was completed. At the Council held at Thionville, in A.D. 800, the resolution was adopted—that the Christian Faith should be preached to the Northern nations. Ebbo, archbishop of Rheims, voluntarily undertook to fulfil this mission, and applied personally to the Pope for instructions. The bull* granted to him by Paschal I, is the most ancient document having reference to this subject, now in existence. An unexpected circumstance occurred to enliven the zeal of the new missionaries. One of the kinglets who divided the Danish states among themselves, Harald Klak, the prince of Jutland, was discomfited in battle; and, being hardly pressed by his enemies, he fled to the successor of Charlemagne for protection. The pious emperor eagerly seized this as an opportunity favourable for making an available proselyte. He preached to the pagan fugitive, converted him, baptized him, and restored him to the sovereignty of his former dominions. When Ebbo arrived in the north, he found a patron in this disciple of Louis. Unfortunately, the petty prince of Jutland was unable, however willing, to sustain the Faith he had adopted; wherefore, after preaching some sermons and baptizing a few persons, the archbishop returned to France.

In his apostolical labours, Ebbo was succeeded by Ansgard, a monk of Corbeil. This devotee possessed youth, vigour and hardihood: he was animated with the virtues of a christian and the zeal of a missionary. He departed for the place of his destined ministry, accompanied by Authbert, one of his friends, who cherished, like himself, an enthusiastic anxiety for proselytism. After a tedious

* This curious and important "instruction" has been saved for useful reference, by bishop Pontoppidan, in his "Ecclesiastical Annals."

and painful journey through Germany, the two preachers arrived in Jutland, their ungenial destination. There, Ansgard energetically prosecuted his appointed enterprise: there, also, he was supported by Harald the Hapless, who caused the pagan temples to be overthrown, and their idols to be destroyed. But, enraged by witnessing these outrages on their religion, two young princes attacked Harald, and once more drove him from his kingdom. No longer finding encouragement in Denmark, Ansgard passed into Sweden, where the aged king, a descendent of Regner Lodbroc's, had manifested intentions favourable to Christianity. As the good monk was travelling, he fell into the hands of robbers who plundered him of the presents he was carrying to the king, and also of about forty volumes of books, which formed, in these days, no inconsiderable treasure. Ansgard remained a year and a half in Sweden, and enjoyed the satisfaction of seeing a church consecrated to the worship of the true God, in a heathen country.

This zealous ecclesiastic composed a life of Saint Villehad; and, in all its features, his work resembles the holy legends which other zealous so abundantly produced. He wrote another book which might, even now-a-days, prove highly important in furnishing materials for histories of the Northern nations. This was a journal of his journey through Germany, Denmark and Sweden. It is certain that this record of Ansgard's adventures is deposited in the library of the Vatican, but the utmost researches hitherto instituted for its recovery have been unsuccessful.

The germs of religious instruction sown in the North, by Ebbo and Ansgard, took effect only in some isolated places, and produced few results. In the year DCCCCLXXII, the territories of Harald Blaataend were invaded by Otho the Great, who assented to discontinue his aggression on the condition of Harald's submitting to be baptised. But the example of this prince was not extensively followed by his people. Existing as a nation of soldiers, ever occupied with war and piracy, they had little leisure to listen to the sermons of missionaries, and still less to reflect on their doctrines. Moreover, the new religion thus preached to them, the humble and peaceful religion of Christ, was not of a nature likely to win their attention. How could the law of mutual reconciliation be comprehended by men who regarded revenge as a pleasure and a duty: how could the law of justice be understood by herds of corsairs who spent their lives in plundering foreign coasts: how could the law of humanity be recognized by ferocious myrmidons, who caused the blood of man to stream upon their altars, as a sacrifice for deprecating misfortune

or for ensuring success! Odin, with his murderous lance; Thor, with his mace, the emblem of violence; these were the gods whose goodwill they propitiated; and, when their sages discoursed to them of the Valhalla,* with its eternal combats and its inebriating banquets dispensed by Valkyriar, all this to them constituted the Future; to them, it was their Heaven!

Another difficulty obstructed the propagation of Christianity among the northern people: this was their language. The French, English and German missionaries who successively undertook this beneficent office, were alike ignorant of the primitive Icelandic tongue and of the modern Scandinavian dialects. In A.D. *MLXXVIII*, Pope Gregory expostulated with the prince Harald Svendsson concerning this difficulty, and invited him to send some Danish youths to Rome, to be instructed in the principles of the Christian religion; and, on returning home, to explain these to their countrymen.

Like Julian the apostate, Svend Treskiæg the successor of Harald renounced the Christian faith, and endeavoured to restore the worship of idols. Nevertheless, in spite of the people's indifference to the precepts of the Gospel, and in spite of the impediments opposed to the zeal of missionaries, the voice of Everlasting Truth had gradually gained attention, and the Bible was adopted for the

* In the centre of Ida plain, that is the zenith of the heavens, the Æsir raised Valhalla, the chief abode of the Gods. Its roof is formed of glittering spears and shields; mail corslets are scattered over the seats; the wolf guards the western gate; the eagle hangs overhead. Thither the souls of the brave are invited to drink the good mead by Odin. They are served by celestial Valkyriar; listen to the harp of Bragi the eloquent; or pursue the exercises of war. Twelve other halls, answering to the signs of the zodiac, were also raised by the Æsir. Among these halls, were *Alfheim*, the dwelling of Freyr, the sun-god; *Breidablick*, the wide-shining palace, once the habitation of Baldur; and *Vingolf*, the hall of Freya, the moon-queen, where the Einheriar and Valkyriar, the pure on earth, join in immortal dances and enjoy the happiness of heaven. Odin, the all-father, the father of victories, daily selects from the dead those who, by their deeds and virtues, are thought worthy of Valhalla. His two ravens, *Hugin* and *Munnin*, memory and understanding, fly abroad every morning at daybreak and return at meal-time, when they whisper to Odin all that has taken place on earth, to enable him to make a worthy choice. The Valkyriar are his messengers to choose the slain on earth and to minister to them in Valhalla. The shooting stars were thought by the Northmen to be these Valkyriar, and their appearance denoted approaching battle. See *The Voluspa*, with a free translation and illustrative notes; by T. Smith, F.S.A. 8vo, Leicester, 1838, p. 19 and 35, —a remarkable Monograph, very highly distinguished by the purest literary elegance and the most judicious archæological research.

rule of their faith and conduct by increasing disciples. When, in the year **MXIV**, Canute the Great ascended the throne, the Christian religion had been well nigh established in Denmark. He now had only to maintain its ascendancy, and he possessed the means of accomplishing his purpose. Never was there, in the north, a monarch more powerful. He reigned, at the same time, over Denmark and England; and, on the death of Olaf the Pious, he assumed the sovereignty of the Norwegian dominions. Above the contemporary princes, Canute was distinguished for his wisdom and courage and humility. He built churches and endowed monasteries. With equal zeal, his Danish successors promoted the interests of Christianity. The worship of Odin was forgotten. In Denmark, as in other European countries, the clergy furnished their flocks with education. Secular knowledge found a quiet resting-place in the temple of God. Civilisation emanated from cloisters and churches.

During his episcopate, Saint Ansgard established an institution for learning at Hamburgh, and twelve young Danes were admitted into it as pupils. This is the most ancient school in the North, as mentioned in history. There was another at Lund, in the twelfth century: in the thirteenth, one was founded at Ripen, one at Odensee, and one at Roeskild. These were capitular seminaries, superintended by bishops and regulated by canons: but, at Esrum and Soroe, others were conducted in the cloisters. All these institutions enjoyed particular endowments; but, for the most part, they were required to receive a certain number of free scholars. At Odensee, two bishops augmented the master's salary, and restricted him from educating poor boys. For such, however, Eric Menved* built a spacious house, and bishop Navne afterwards erected another. At the school of Roeskild, twelve students were gratuitously lodged, boarded and instructed in the principles of grammar and music. But these endowments were insufficient for the wants of many scholars; and, on those who could not obtain exhibitions, the privilege of soliciting eleemosynary largesses was conferred.

The same persons who founded establishments in cloisters for education, also founded libraries. These consisted of five or six vo-

* Eric Menved, says the chronicler, "construxit domum divitem pro pauperibus scholaribus." See *Scriptores Rerum Danicarum* medii ævi, partim hactenus inediti, partim emendatius editi; folio, 6 Vol. Hafniæ, 1772—1786; Vol. iv, p. 61. This valuable collection was edited by James Langebek and Peter Frederic Suhm, who added notes and introduced corrections of the text.

lumes; and, in that age, two or three prayer-books with a few treatises in theology, were regarded as a rare and valuable collection. However, by the twelfth century, several of the classical writings had found their way into the Northern regions. Bishop Absalom presented the school of Soroe with a copy of Justin's history. Valerius Maximus had been studied by Saxo the grammarian. In Denmark, nevertheless, it was the same as in other European kingdoms. Paper had not yet been invented: parchment was still scarce and expensive. Many of the monks experienced no scruples in erasing classic manuscripts, for the purpose of writing on them the monastic rituals. For this practise, these men have been often and severely censured; but, while they are thus obstinately charged with vandalism, ought not this vice of misinstruction to be much extenuated, as an offspring of the age in which they lived, and of the kind of education they received? How could the treasures of Grecian antiquity, the elegancies of Roman literature, how could these be rightly appreciated by poor priests secluded in their conventual schools, where a barbarous latinity was the best wherewith they were familiar? How could devotees who cherished an austere faith, who deduced its origin from a manger, how could they entertain much respect for the fictions of paganism, for the renown of Athens and her eloquence? What they themselves knew, that they cheerfully and assiduously communicated to the people; and how, then, could they impart higher revelations? The vandalism with which there is a custom of reproaching them, it was no fault of theirs: not theirs it was, but a defect of the age when they lived. At the time when Christianity was introduced into the north, when the clergy had to contend with the brutal manners and the impetuous vindictive character of a nation of soldiers, then it was that a prayer-book would prove infinitely more conducive to the progress of civilization, than the epigrams of Martial, the metamorphoses of Ovid, or Cicero's oratory.

Among all the Danish libraries, that of Lund is the most ancient. Bernard the canon, who died in A.D. MCLXXVI, presented it with many valuable books:* the canon Amund bequeathed to it a missal, a capitulary and a psalter: but, as a munificent philobiblist, the archbishop Anders Suneson† surpassed all his predecessors, in be-

* When recording this liberal donation of Bernard's, the chronicler uses the words, "multos bonos libros Ecclesiæ dedit."—See *Langebek's Collection*, Tom. III, p. 452.

† This generous prelate was a useful contributor to the literature of his country: it owes to him the *Leges Scanisæ Provinciales*, ante cccc annos, la-

stowing an excellent library on the cathedral of this city. His precious gift consisted of a Bible in three parts, the gospels, the pentateuch with copious annotations and corrections, books of maxims and allegories and morals, gloses upon the canticles, seven books of laws, bodies of canons, and many others, as enumerated by Langebek, who has preserved the catalogue.

Libraries were also founded in other cities of Denmark, in coëval times; and, during the fifteenth century, several individuals meritoriously occupied themselves in forming private collections of books. Thus, from the twelfth century, Science derived its two primary sources—the *Schools and the Libraries*. The number of students admitted into the earlier institutions, was yearly augmented. At the epoch of the Reformation, seven hundred pupils were prosecuting their studies at Ripen: to Roeskild, eight hundred had then resorted for instruction. At these cloistral schools, the children of the nobility, as well as those of the commons, were educated. Christiern II was a scholar there, along with the sons of citizens; and, like them, the prince was taught to chant in the reading-desk.

Now, with regard to the pupils disciplined in these seminaries, to what irksome tasks would the best feelings of youth be frequently subjected? What, too, could be the fruits yielded by the long years devoted to such studies? At these institutions, all the prelections were delivered in an impure latin, abounding with solecisms. At one time, the scholar who found himself qualified to read, to explain a few passages in the Bible, and to chant the psalms, had acquired high claims to the distinction of a learned character. With the twelfth century, however, there outglimmered a twinkling of intelligence. At that period, Absalom was bishop of Roeskild and the prime-minister of king Valdemar, having Saxo the historian for his secretary. But this light proved no better than a flickering gleam: it soon disappeared, and left Denmark to be dazzled with the deceitful glitterings of a counterfeit science.

Before the close of the thirteenth century, all the traces of true

time redditiæ; 4to, Hafniæ, 1590; and *Jus Selandicum* xvii libris; 4to Hafniæ, 1692. Both these works were edited and illustrated by Harald Huitfeldt, an eminent Danish historian and chancellor of the kingdom. In his youth, the archbishop visited England, Germany, France, and Italy: he graduated as Doctor of Laws at the university of Paris: on returning to Denmark he obtained the office of chancellor to Canute VI; who despatched him on an embassy to Rome in the year mxcv: his was a very busy life, being constantly engaged in important civil, military and ecclesiastical concerns.

learning, obtained under Valdemar I and Canute VI, were utterly extinguished. No one then thought of exercising his mental powers in scanning the sublimities of mental science, or in conning the niceties of philology. From the schools, the poets and the rhetoricians, the ancient historians and the first philosophers, were altogether banished. Saxo's venerated favourites—Valerius Maximus, Lucan, Juvenal, Statius—all were buried in the dust: they were superseded by *Summulæ*, *Sententiæ*, *Cursus Logicales*, *Quodlibeticæ*, and similar fantastical compilations. The whole course of study was employed upon the canon-law and dialectics; or rather, as Luther observed, upon sheer sophistry, for every body had his attention engaged with trifling and subtlety.

At this epoch, the list of books used in the Danish schools by the pupils, affords an idea of the nature of their studies. Here it stands. I. The *Doctrinale*; a latin grammar, in hexameter verse, by Dr. Alexander Villadeus.* II. The *Græcismus*; another latin grammar, by Eberhard de Bethune. III. The *Labyrinthus*; by the same author: it formed a sort of system of rhetoric and poëtics. IV. *Æquivoca*; of these, here follows an example. By a mystical rhetorician, the *Earth* is denominated hell, a virgin, god, eternal life and human flesh, and he supports these various assertions with passages from the Bible. Thus, the earth is *Hell*, because you find in Job, "*antequam vadam ad terram tenebrosam*:" it is a Virgin, for it is written in one of the Psalms, "*veritas de terra orta est de virgine*:" it is God, because in the Scriptures it is said, "*dic tibi terra levem cæli supereminet opem*:" it is Eternal Life, for in the Psalms it is declared, "*portio mea Domino in terra viventium*:" and the earth is Human Flesh, because in Job there is the declaration, "*terra data est in manus impii*." Such were the paralogical exercises whereon the Danish youth misemployed their time and intellectual energies, during the middle ages. V. The *Synonymorum Liber*, an ingenious attempt to distinguish the different words which have the same signification. VI. The *Composita Verborum*, which would find a place under the head of Etymology in a modern grammatical system: this article and the two preceding were composed

* "*Alexandri Galli, seu de Villâ Dei, Doctrinale, sive grammatica latina metricè scripta*," was in common use in the Schools, and it passed through more than fifty impressions before the end of the fifteenth century. The "most esteemed" edition of the *Doctrinale* is that of Venice in folio, with the types of John de Spirâ, between the years 1470 and 1473: it forms a Tract composed of forty-five leaves.

by John de Garlandiâ,* who attained very high distinction in the eleventh century. VII. The *Writings of Donatus* the grammarian, whose book on the eight Parts of Speech continued in use till about the middle of the last century. VIII. The *Danish Proverbs* of Peter Lollius, accompanied by a latin translation in leonine verse. IX. *Facetus*, a code of instructions, by proverbs, for grounding the manners of young persons: it is a silly and vapid medley, compiled in latin verse.

This class of books was interdicted by Christiern II in the fifteenth century; and, in their stead, came the following. I. The *Fundamentum in Grammatica*, composed by Peter Albertsen the vice-chancellor, who selected the best parts of the *Doctrinale*, the *Græcismus* and the *Labyrinthus*, with a degree of judgment which

* John Garlande was an Englishman by birth, but the place of his nativity and the time of his decease have escaped the researches of biological historians. About the middle of the eleventh century, he retired to the Continent with a view to avoid the miseries resulting from the savage and incessant aggressions of the Danes, who were then devastating the fairest portions of England, Scotland, and most of the British islands. He gave prelections in logic and philology in the schools of Paris, Thoulouse, and other places; and, at the same time, he found leisure to compose many of his poetical and scholastic productions, and to write several essays in English history. There is probability in the conjecture that he returned to his native country, after William the Norman had established his pretensions to the English throne. Some brief sketches of this celebrated dialectician were collected, from the accounts of earlier biographers, by bishop Tanner, who inserted them in his "Bibliotheca Britannico-hibernica," p. 309-10. The grammatical treatises of John de Garlandiâ were all printed previously to the end of the fifteenth century, and this circumstance is evidence of their extensive popularity. *Interpretatio Vocabulorum Æquivocorum* appeared in 1486, with a commentary by the editor: the *Composita Verborum* issued from the press of Gerard Leen at Antwerp, in 1486: and the *Synonyma* came forth, in a first impression, at Reutlingen, in 1487, in a quarto size. Wynkyn de Worde gave editions of the "*Æquivoca*" and "*Synonyma*," with the following titles. *Multorum Vocabulorum Æquivocorum interpretatio Magistri Johannis de Garlandia grammatico et Latini cupido permaximè necessaria*; 4to, Londini, 1499, 1505, 1510, and 1517. *Synonyma Magistri Galfridi Anglici nupervimè correctæ*; Londini, 1500, 1505, and 1510. This last was printed by Pynson, 4to, Londini, 1496, 1500, and 1509: the former came from the same press, 4to, Ib. 1514. The *Facetus* is sometimes represented as one of John de Garlandia's productions: it is frequently bound up with his poem on Contempt of the World; 4to, Lugduni, 1486. Galfrid the Englishman, who expounded John de Garlandia's *Synonymes* and *Æquivocales*, was a native of Norfolk or one of the adjacent counties; his surname was Starkey: he became a Dominican friar, and wrote a "*Medulla Grammatices*" and other philological books: he "flourished" in the last half of the fifteenth century.

was approved. II. The *Epistolæ Magni Curci*, which were fictitious letters interspersed with historical and geographical sketches. III. The *Fasciculus Morum*, a bundle of breeding, from the cogitations of Henry Boort: it was printed at Cologne in 1517. IV. The *Hortulus Synonymorum*, a garden of synonymes, "laid out" by Henry Faber, and printed at Copenhagen in 1520. V. The *Vocabulorium ad usum Ducorum ordine literario cum eorum vulgaria interpretatione*, printed at Paris in 1510.

Such were the class-books which, in these days, the youth of Denmark were obliged to study; and Wormius* affirms that the period of their discipline extended from fifteen to twenty years. At the end of this tedious probation, those students who had become old in the investigation of scholastic sophistry, they became eligible to the priesthood or the magistracy; but their progress in the *Doctrinale* entitled them only to recommendation for inferior offices. Generally, the nobles enjoyed greater privileges than the common people. The former held the best prebends; and, in order to the obtaining of rich benefices, upon which the eyes of every scholar were fixed, the nobles were not required to learn so many hexameters, nor to penetrate so deeply into the philological mysteries of the *Labyrinth*, nor to distinguish so nicely the ingenious combinations of the *Synonymical* garden. They belonged to the order of Nobility, and their rank was nearly equivalent to a bachelor's degree. In the

* Olaf Worm deservedly attained the highest distinction, both in Literature and Society, as a scholar, an anatomist, a naturalist, a physician and antiquary. He was born in the year MDLXXXVIII, at Aarhus the episcopal city of Jutland: his death took place at the Danish metropolis in MDCLIV, in the sixty-seventh year of his age. Having completed an extensive course of education at the universities of Giessen, Marburgh, Strasburgh, Bâle, Padua and Montpellier, he devoted some time to journeys of observation through Holland, France and Germany: he made two different visits to England, for the sake of improvement; and, at Bâle in MDCX, he obtained the doctorate in medicine. In MDCXIII, he returned to his native country; and, on fixing his residence at Copenhagen, he successively discharged the important duties of a Professor of Greek, of Natural Philosophy, of Physic, and of Court-physician to Christiern IV, his sovereign. The well-merited celebrity of "Olaus Wormius," as his name is latinized, reposes securely on the acknowledged usefulness of his numerous and elaborate writings. From the results of his varied and successful researches in natural history, anatomy and northern archaeology, Science derived accessions both of discovery and improvement. His *Fasti Danici*, folio, Hafniæ, 1643, and *Runica, seu Danica Litteratura antiquissima*; folio, Hafniæ, 1652, affords information regarding the studies of youth, in the northern universities, previously to the middle of the seventeenth century.

literary history of Denmark, there is mention of a canon who was so illiterate as to be incapable of signing his own name.

During the twelfth and thirteenth centuries, the University of Paris* maintained the highest celebrity, all over the world. The reputation of a Lombard, a Champeaux, an Abelard, constantly attracted crowds of foreigners to its schools; and, as the philosophers then expressed it in their extravagant diction, the Parisian University was the choicest gem in the jewel-house of Christ, the arsenal wherein were fabricated the armour of faith and the sword of the spirit! It was the key of Christianity, the paradise of the Catholic church, the temple of Solomon, the holy Jerusalem, the tree of Life in the garden of the World, the resplendent lamp of the House of God! The Rector of this University took precedence of ministers, barons, counts and cardinals: his dignity placed him next in rank to the pope and the king. They who had studied at Paris were ever after reputed as philosophers: whoever took the degree of M.A. there, he might aspire to the highest honours; he was addressed by the style of "*magistratus excellentia*," sometimes by that of "*venerabilis magistrorum majestas*," and not unseldom even by that of "*deitas*," in illustration of hyperbolic impiety. Many Danes frequented this university, and four of them—*Henningus de Dania* in mcccxii, *Petrus de Dania* in mcccxxvi, *Johannes Nicolai* in mcccxlvi, and *Manaritus Magni* in mcccclxv—acquired the dignity of its rectorate. The Danish scholars constituted a part of the *Natio Anglicana*, and they resided in a house assigned to them in the vicinity of the Sorbonne. In the fifteenth century, every chapter in Denmark was required to send one or two students to Paris; and, at that time, it was said of Stangberg bishop of Ripen, that this learned man, the friend of learned men, enacted and established as a law, with consent of the chapter—that no person should be admitted into the order of Canons, unless he had studied diligently for three years in some distinguished university.

These remote pursuits, however, did not prove so beneficial to the interests of Science as might have been expected. Already had the "universitary" philosophy of Paris fallen into a false direction; for, instead of being applied to erudite researches and serious discussions, it was prostituted in support of the most pitiful controversies, of the

* E. C. BULZUS.—*Historia Universitatis Parisiensis*, a Carolo imperatore A.D. dccc, usque ad annum mdc; folio, Vol. i et ii, Parisiis, 1665; Vol. iii, Ib. 1666; Vol. iv, Ib. 1668; Vol. v, 1670; et Vol. vi, Ib. 1673. In the phraseology of Bibliographers, "this is a Work of extreme rarity."

emptiest conceits and cavilings of a puerile "scholasticity." There was a time when he who aspired to pass for a scholar and a gentleman, was not obliged to understand the Greek philosophers and the Roman historians: his were held for rare accomplishments, if he had dabbled in the *Entitates* and *Nominalitates*, and other no less sublime conceptions. In that age, such questions as these were propounded and seriously discussed. Whether any thing was God, or God was any thing? Whether God could know what he did not know, or could not know what he did know? Whether it was a greater sin to massacre a thousand men than to rob a poor man of a pair of shoes? Whether the pope can abolish the doctrine of the apostles? Whether his holiness can exercise authority over the angels? Whether, when *Lazarus* was raised from the dead, his heirs were obliged to restore his patrimony? Thus it was settled, that the man must be a sage, who excelled in arguing on these preposterous sophistical notions, who could most dexterously reduce his adversary to an inextricable dilemma, or embarrass him with a sophism, or escape from him by an evasion. When, therefore, the poor Danes went so far in quest of those wonders of science, it need really be no hard matter to believe that their travels contributed little to the advancement of intelligence, in the land of their birth. Besides, many of them would be attracted to Paris much less by a predilection for knowledge than by a desire to visit a city where, during the twelfth century as in modern times, the spirit of fashion and frivolity sat enthroned. Hence, instead of attending lectures at the Sorbonne, the young deluded northmen would frequent theatres, taverns and clubs, and then return to their families, like Holberg's "*Parisian John*," with a ridiculous itching for exotic pleasure and a profound disdain for native enjoyment.

Better prospects began to open upon Denmark, in the fifteenth century. In A.D. MCCCCLXXIV, after visiting Rome, Christiern I obtained a papal bull for founding a university at Copenhagen. He then wrote to all the bishops in his kingdom, directing them to promote the interests of the new institution. He himself undertook its especial patronage; and, with a view to this patriotic object, he appointed Peter Albertsen, one of the most learned men of the age, to be its vice-chancellor. In the year MCCCCLXXVIII, Albertsen travelled into Germany; and, at Cologne, he engaged several professors to accompany him to the Danish capital. The university was consecrated on the sixteenth day of May, MCCCCLXXIX; and, with a view to increase the number of students, King John prohibited his Danish subjects from entering any foreign school until

they had completed a three years' course at his metropolitan university. Christiern II renewed this interdiction. These expedients, however, proved unavailing. The institution, being inefficiently provided with professors, and also inadequately endowed, it gradually declined; and, in the sixteenth century, its operations were entirely paralyzed by the intestine disturbances which then agitated the kingdom. From MDXXX to MDXXXVII, no rector was elected: the scholars abandoned their studies: the professors deserted their chairs: the university was forsaken; and it did not recover from its depression, until the Reformation had re-animating the energies of intelligence and morality and religion, among the nations.

Whatever might be achieved in the rest of Europe, for the diffusion of Science, its advances in Denmark were tardy and limited. Half a century had elapsed since Guttenberg discovered the divine processes of Printing, and yet at Copenhagen there were only manuscripts. Albertsen presented to the university a library comprising twenty volumes, and this was deemed a valuable collection. He also induced Gottfried van Ghemen, the printer, to settle in this city, and the *first* piece of Danish typography was a latin grammar,* with the date MCCCCXCIII: the second appeared in MCCCCXCV; it is a chronicle in rhyme. Printing-presses were also established at Odensee and Ripen; but, during the greater part of the sixteenth century, most of the Danish books were printed in foreign countries, at Paris, Cologne, Antwerp, Leipsic and Lubec, and these publications were chiefly rituals, mass-books, and some romances relating to chivalry.

During the progressive changes in scholastic study, the Danish language experienced few improvements. Its separation from the Icelandic commenced in the eleventh or twelfth century. Gramm,†

* Gottfried van Ghemen is the only typographer known to have exercised the Art of Printing, in the capital of Denmark, during the fifteenth century. Among the productions of his press, in this city, the *first* was the latin grammar here specified. It bears the title and date, *Regula de Figuratis Constructionibus Grammaticis*; 4to, Hafniæ, MCCCCXCIII. The *latest* work, hitherto ascertained to have been printed by him, is variously intitled—*Nigels van Soré Danské Kroeniké*, *Chronicon de Regibus Daniæ vernaculum et rhythmicum*, *Fratri Nigellii Chronica Danica*, *Niel's Metrical Chronicle* and *Den Danské Rîimkrœeniké*, as mentioned in a subsequent note. It is dated, Hafniæ MCCCCXV.

† John Gramm was a very learned philologist, antiquary, and historian. He died in 1748, in the sixty-fourth year of his age. His researches, judi-

indeed, refers this separation to an earlier period. He supposes that some difference always existed among the three Scandinavian dialects, united under the generic name of *Torræna Tungu* or of *Danska Tungu*, and his conjecture is not improbable.

The most ancient monuments of the Danish language bear no higher date than the twelfth century. These are, the ecclesiastical ordinance of Scania in MCXLI, and that of Zealand in MCLXX: but the manuscript of these ordinances is dated in the thirteenth century. Towards the conclusion of this century, Henry Harpestreng* composed a book on medicine. In the earliest applications of the new language, its Icelandic origin is abundantly apparent: it exhibits the same terminations of words, the same forms of diction. With regard to the elementary structure of the language, it is almost pure Icelandic; but the orthography had undergone an important change. Thus, the Danish speech advanced step by step, resting on traditional rules: ultimately, it was essentially modified by the German, from which it borrowed new modes and new words. These modifications chiefly distinguish it from the Icelandic, in modern times.

Four centuries elapsed before the Danish acquired a character sufficiently determinate to fit it for becoming a literary language. From their being engaged in perpetual wars and adventurous expeditions, the people did nothing towards promoting its development. At their courts, the ancient kings retained pilgrims only and scalds, who entertained their hearers with recitations from the sagas, or with songs in Icelandic verse. The priests and monks used nothing but latin: they concerned themselves exclusively with exercises in that tongue. Subsequently, the kings ceased to speak the Icelandic, and adopted the German language; and, from the fourteenth century onwards, the influence of Germany continued to increase. Eric of Pomerania and Christopher of Bavaria and Christiern I the head of the reigning dynasty, all three were Germans. The first professors of the metropolitan university, and the first printers in Denmark, were brought from the German states. Whilst the learned persisted in using the latin, the German tongue prevailed among all

ciously devised and skilfully accomplished, have proved eminently conducive to the elucidation of northern archæology.

* Whatever might have been the advantages derivable from Henry Harpestreng's book of medicine of the ancient Danish dialect, these would necessarily be limited, by reason of the works remaining in manuscript. As an author, this person's importance is unnoted in medical history.

other classes of society. Saxo* wrote a history of his country in admirable latin; and, as the highest offices in the state were held by ecclesiastics, the laws were written in that language, so late as the sixteenth century.

The first royal proclamations composed in the Danish language, are dated in the fourteenth century; but, not before the fifteenth, did the clergy begin to use calendars and prayer-books in the vulgar tongue. To the same epoch, are referred the versified *Proverbs* of Peter Lolliust† and Niel's *Metrical Chronicle*, two of the most ancient relics of Danish poetry; but a biography of Peter Lollius is altogether inexistent—so completely has the literary history of this period been neglected. Since it is unknown where he lived, two

* Saxo was a Dane by birth, an ecclesiastic by profession; and, from his excellent attainments in learning, he derived the honourable designation of *Grammaticus*, the grammarian. While engaged in the discharge of his peaceful duties as a priest in the cathedral of Roeskild, and under the fostering countenance of Absalom his bishop, Saxo compiled his history of Denmark and its dependencies. His great prudence and distinguished talents, combined with exemplary piety, led to his being deputed on a mission to Paris, in A.D. mclxi, for the purpose of inducing some of the Gallican monks to visit his native country, and to assist in reforming the discipline of her religious orders. This justly venerated personage became one of the brightest ornaments of the twelfth century: he died in the year mccviii, at an advanced age. Saxo's History bears a high reputation for the purity and elegance of its latinity; his statements and opinions are regarded as authorities, for their general accuracy: even his imaginative embellishments are respectable, for their liveliness and beauty. His work has passed through several editions, with the title, *Danica Historia*, libris xvi, annis ab hinc trecentis quinquaginta, summa gravitate, rerum denique admiranda varietate, intermixtis aliarum quoque Gentium historiis, conscripta: folio, Parisiis, 1514; Basilee, 1534; Francofurti ad Moenum, 1576; Soræ, 1644; and 4to, Lipsiæ, 1771.

† The first and second of these Proverbs are taken literally from the legal code of Jutland. According to the scanty information afforded by Bartholin, in his *Bibliotheca Danica*, p. 119, 383, Peter Lolle was a "legifer," magistrate or provincial judge, in the province of Zealand, and his Collection of Proverbs has the title, *Adagia, Danicæ et Latinæ*; 4to, *Hafniæ*, 1508; 4to, *Parisii*, 1515; 8vo, *Aarhusii*, 1614. In Moller's Appendix to the *Bibliotheca Danica*, the following notes concerning Peter are inserted. Petrus Lollé, Lanlandus, a pueritia in exercitiis scholasticis apud Roschildenses diu versatus, tandem rebus politicis animum adjiciens, prudentiâ et eloquentiâ mirum in modum excelluit, adeo ut ferendis legibus et dijudicandis causis publicis adhibitus omnium admirationem, et *Legistæ* cognomen meruerit. Collegit et, pro ejus ætatis eruditione, *Paræmias Danicas* latinitate donavit. See the "Historia Danica of C. C. Lyscander; folio, *Hafniæ*, 1622. Niel's *Metrical Chronicle* is the "*Danske Rimekrønike*" afterwards noted.

Danish philosophers endeavoured to discover where he was buried ; but all that they ascertained concerning him is—that Peter Lollius flourished in the fifteenth century. From the laws of his country and the traditions of its people, Peter collected those moral apophthegms, those practical maxims, which the Arab teaches his sons, which Odin chanted in the Havamal, and which still survive at the two extremities of the globe, in the balmy arbours of the East and in the gloomy grottoes of the Northern forests.

These Proverbs are remarkable for their terseness and simplicity. Sometimes, a perfect moral sentiment is expressed in one single verse ; occasionally, it occupies two : rarely, does it extend to more. Peter Lollius arranged his Collection of Proverbs in alphabetical order, and translated them into a barbarous and frequently unintelligible latin version. On its first appearance, his book obtained extraordinary popularity. It was admitted into all the schools, and became a regular class-book. Nevertheless, Christiern Pedersen complained grievously that he was obliged, even in the sixteenth century, to waste the most precious days of his youth, in studying this piece of “detestable latinity.”

“*Den Danske Riimkrønike*,” the Danish metrical chronicle,* was the production of a monk of Soroe,† who lived towards the end of the fifteenth century. This rhymers object was, to produce a more popular history of Denmark than any then in existence. That of Saxo’s was freely used by him, and he unhesitatingly adopted it, from beginning to end. Where this work failed him, he borrowed his relations from the latin annals ; but, instead of translating the narratives of his predecessors, or like them recording events, he essayed to give his book a dramatic arrangement. By this method, each of the kings is brought on the stage in succession ; and, as an actor, he describes the incidents of his own life, his projects and his achievements. This sort of soliloquy yields a temporary gratification, but it soon becomes irksomely monotonous. In other re-

* This *Danish Chronicle*, in rhyming verses, was first published in A.D. mccccxcv ; and, in 1825, M. Molbeck edited a new edition, to which he added an introduction and glossary.

† This was brother Nigel, Niel or Black, who composed his original rhyming chronicle in the Danish language. Here follows its latinized title, “*Fratrie Nigelli Chronica Danica, omnium regum Danie vitam, secta et bella a Dano usque ad Christianum I complexa ; reperta in praelio et clade Danorum ad Hemmingstedam in Dithmarsia, die 17mo Februarii, A.D. m.*”—See the *Bibliotheca Historica Dana-Norvegica* of N. P. Sibbern, p. 29, and the references there cited.

spects, the "*Rimkrønike*" is destitute of value, both as a poem and a history. It merits attention merely for its language, as a sketch for comparison with subsequent writings.

Mikkel, an ecclesiastic of Odensee, acquired considerable celebrity for his religious publications. He composed several poems, and one of these was a lengthy Lay on the Virgin's Rosary.* He chanted the lady's bunch of beads with the fervour of a pure papist; he extols the advantages of tithes with exquisite ingenuousness; and he lauds the Virgin with a warmth of love and veneration seldom exceeded in the mystical adorations of the "*Minnesinger*." This poem makes the Virgin enter into a colloquy with a monk, to whom she observes—"If you were to be shut out of heaven for your sins; if God himself were to swear that you should not be admitted there, I myself have still the power to be your saviour, but you must prove to me a faithful servant. I can interpose between Him and the transgressors, before their condemnation is determined. I can prevail on Him to create a new heaven." Further on, she adds—"When any one has committed an iniquity so great as to require his banishment from the presence of God, if the sinner shall read the Psalms of the Virgin with devotion, I will come to his succour and restore him to the favour of God." But a passage concerning the payment of Tithes is the most remarkable. "Pay faithfully," it says, "the tithe that thou owest to the priest and the church: if thou failest in this duty, the judgment of God will condemn thee; upon thee, His anger will fall: thou shalt witness the death of thy swine, thy oxen and thy sheep: the land which thou tillest shall be struck with sterility; and, after thy tillage, nothing shall grow save thorns and thistles. If thou failest to pay thy tithes, every plague will fall upon thee; thy friends will forsake thee; thy children will pursue the paths of iniquity, and thy first-born will be hanged: all the joys of this world will be denied thee, and thou thyself shalt be hurled into hell."

For the age in which he lived, Mikkel displayed a wonderful facility in the art of composition. His verses are flowing and harmonious; and, in correctness of language, he surpassed his predecessors. With regard to the powers of conception and imagination, his

* This ancient poem is written in Latin and Danish: it has the title, *Expositio pulcherrima super Rosario Beatæ Mariæ Virginis: Her begynder en Møghet nyttelig bog om Jomfru Marie Rosenkrans*: it was printed in the year MDXV.

position is secondary ; but, in respect to style, he deservedly ranks at the head of the Danish poets, his cotemporaries.

About a score of years afterwards, and in the same city of Oden-see, there arose another poet whose name ought to be distinguished among those eminent persons who have struck out a new course and indicated a new style. This ingenious person was no other than the schoolmaster Christiern Hansen, who attempted, the first in Denmark, to establish theatrical entertainments.* He wrote three scenic pieces, partly humorous partly serious, whereof the subjects are evidently borrowed from the ancient German dramatists ; and, by its rudeness, his composition throughout betrays a palpable lack of experience. His first piece bears for its title, "*The Story of a Man who outwitted a Woman, with the help of a Dog,*" and ten characters act their assigned parts in the representation. One of them, Præco, opens the affair with a prologue designed to arrest the hearers' attention, and the orator concludes with a moral induction. Instantly after this, a wealthy citizen makes his appearance ; and, although newly married, he is ready to set out on a pilgrimage, and bids adieu to his bride. Scarcely has the good man taken his departure than the wooers of his wife present themselves at her door. First of all, a boorish neighbour advances, and bluntly prefers a declaration of love to the lady, without having recourse to rhetorical professions. The young wife disdainfully repels him. She is next addressed by a monk, in prim and pretty phrases ; and he is succeeded by a courtier who makes the most magnificent promises. But the bland flattery of the one and the other's superb protestations alike prove unavailing ; the monk retires in despair ; the courtier goes in search of a sorceress, and hires her to enchant the fair dame of whom he declares himself enamoured. Forthwith to her aid, the hag invokes the infernal spirits ; but, as she is then only a novice in witchcraft, the devils hold her in derision. Feeling annoyed,

* This observation must be considered as referring, in a limited sense, to dramatic writings composed according to definite rules ; for, it is certain that the Danes, the Swedes and the Norwegians had long been acquainted with that sort of scenic exhibitions whereof traces are to be found in the early history of every people. The Edda speaks of the harlequin whom Gylf met at the Gate of the Gods ; and Snorro Sturleson relates that king Hagleik retained harpers, conjurers and minstrels, at his court. Several poems of the *Kæmpeviser* may be regarded as dramatic compositions which were recited with a sort of theatrical accompaniment. In Sweden anciently, the *Lakare* were attended with music and pantomimes.

the courtier takes to blustering ; and, having lost confidence in her old friend Beelzebub, the profligate hireling has recourse to another expedient. She takes a vile, ugly black dog ; and, weeping ruefully, she presents herself before the inflexible bride. "What have you got here, my good woman?" the lady inquires sympathizingly. "Alas, Madam !" the siren asseverates, "I have met with a dreadful misfortune. Believe me ! I had a charming daughter, the most beautiful, the most affectionate, the most delicious young damsel, the eye ever beheld. Well ! a young gentleman pays his addresses to her ; she declines the offer ; he persists ; she remains inflexible ; and, in order to be revenged, the lover procures her being changed into a dog. There," she exclaims, in pointing to the hideous brute beside her, "there stands my poor dear child !" "O Heavens ! is it possible," cries the new-married wife, "that when a woman rejects a declaration of love, she incurs the risk of being transformed into a beast ?" "Nothing is more certain, Madam ; every day, the same thing occurs." "Ah me ! how unfortunate ! Why, this very morning, I have rejected a man of fashion, every way accomplished, and abundantly amiable." "Send for him instantly," cries the betrayer, "otherwise there is no knowing what may happen." The gentleman re-appears ; the piece finishes ; and the audience separates, delighted and edified with so profound an artifice for deceiving a silly woman.

Hansen's second essay is the "*Judgment of Paris*;" and it is nothing other than a combat of coquetry by three goddesses, who strive to gain the preference of a youthful shepherd. Juno promises him sovereignty : Minerva engages to endow him with wisdom : and Venus undertakes to delight him with the enjoyments of love and beauty. Paris is young, and sighs not for the sweets of power : neither does he languish for the excellencies of wisdom : he pronounces the charms of Venus to be incomparable, and accepts her promised boon. Juno regards his award with scorn, and withdraws, uttering threats of vengeance.

The Schoolmaster's third lucubration bears the title, "*The Life and Death of Saint Dorothy*;" and this is a "Mystery" founded on a play often acted in France and Germany, during the sixteenth century.

In these dramatic productions of his, the worthy "Dominie" of Odensee merits little commendation on the score of invention. Here and there, however, he sketches some interesting representations of manners, and doles out a few racy reflections. Otherwise, his verses

are generally rather polished, and his diction indicates advancement in the culture of his native language.

Whilst Christiern Hansen was thus endeavouring to establish the "dramatic art" in Denmark, an anonymous writer translated the romances of chivalry, the "*contes plaisans*," the tale of Ruus, and the "*histoire galante*" of Flores and Blantzeflor.

Ruus is one of those bitter satires which the "Middle-Age occasionally launched forth against the monks, by way of vindicating its independence at the very time it was playing the disciple." The author of Ruus relates how, one day, Disorder found his way into a monastery, Disobedience raised his front before the altar, and Depravity unlocked the cellars. For a length of time, the devil had kept a vigilant eye upon the saintly brotherhood; so, he concluded that this was an excellent opportunity for catching a cluster of souls, and that it would be a great shame were so good a chance suffered to escape. Behold, then! the arch-hypocrite puts himself into livery, assumes a respectable appearance, hastens to the abbey, and solicits the place of a domestic servant. The abbot interrogates the false menial, who produces satisfactory testimonials concerning his qualifications, and is engaged for cook to the establishment. What marvellous management of the sagacious abbot! Well, from the hour that the devil "*posa la main sur les fourneaux*," the whole convent shone like a guild-hall at the time of an illumination. From that day forwards, adieu to fasts and penance, adieu to vigils and meagre diet. The skilful cook entirely proscribed the insipid fare enjoined by the monastic regulations, declaring it to be altogether unworthy of attention. With the design of exciting the impaired appetite of his masters, and of prolonging the time of their repasts, he provided well-spiced condiments, and invented endless refinements. At early morn, the fire of hell crackled in the kitchen: the tables groaned under the weight of substantial hams and haunches of venison; and, throughout the day, the cellar was open. There, sat the monks roaring over their bacchanalian orgies; and the devil, who treated them so handsomely, soon perceived in their increasing rotundity that his efforts were not fruitless. Several months glided in this state of delicious indolence; and the cook, who had so nicely played his part in the instalment of laziness and revelry at the abbey, he began to fancy himself entitled to a recompence. Imp-like and impudent, he demanded to be made a monk; and, though a devil as he was, a monk they made him accordingly. He received the cowl between two butts; and, thenceforward, Brother Ruus became

his designation. For this once at least, the miserable monastery fell entirely under the devil's dominion. The choir was abandoned; neither prayer nor holy chant were now heard in the church: brother Ruus over-ruled the abbot, and brother Ruus governed the monks also: he tumbled by day, and he played the rake by night: he experienced a particular pleasure in exhibiting the cowl and the cassock where they ought never to be seen. When he performed excursions through the country, his presence proved a great misfortune to every house he visited, and to the peasants with whom he stopped to talk. His envenomed breath disspread a moral poison around him, and he rarely entered a hamlet without exciting a quarrel or committing a cruel theft. One day, however, brother Ruus fell a victim to his own knavishness. He stole a cow from a poor peasant who had no other property in the world. For a whole day, the unfortunate man vainly sought for his cow every where, in the valleys and on the hills. At night, on finding himself wildered in the mazes of a forest, he took shelter in the hollow trunk of a tree. At his feet, with surprise, he perceived a subterranean passage: he descended the mysterious way: and, after wandering onwards for many a weary hour, he arrived at the gates of hell. The time was a day of solemn audience. Satan was then seated on his throne, and his emissaries to earth were then assembled to render an account of their proceedings. Some of them had stirred up a civil war: some had created discord in families: others had fostered a delight in robbery, encouraged blasphemy, promoted sacrilege. At these tidings, the king of Pandemonium sometimes grinned a smile most horrible, and sometimes he coaxed his minions with an approving nod. Anon, a jolly demon made his appearance attired in the reverend guise of a monk: this was brother Ruus. His homage done, he proceeds to relate the incidents of his monastic life: the crew of devils envy him his occupation, and Satan himself applauds the villain's cozenage. With the report of Ruus, the council terminated; and the peasant, overwhelmed with dismay, retraced his steps through the hollow oak. Next day, he hastened to the abbey, and described the dreadful scene he had witnessed. The abbot's eyes are opened, and he becomes sensible of his guiltiness: he assembles the penitent brotherhood: and, altogether, they fall on their knees, devoutly imploring the forgiveness of Heaven. Ruus is driven with disgrace from their society; and the purified austerity of their monastic functions is resumed.

This grotesque fiction represents the prominent features of imaginative literature in Denmark, during the middle age. It appears

among the ethological compositions of that period as Gothic arches are seen through clusters of nosegays or the branches of trees. It is an epigram in the middle of a prayer; it is a profession of infidelity interrupting a protestation of faith. This tale obtained an extensive circulation in France and England:* when it was transplanted to Denmark, the time is unknown.

The romance of "Flores and Blantzesflor"† was printed at Copenhagen in MDIX. This clever sketch in chivalry was read, from the north of Europe to the south, in every castle and baronial abode: the Danish version of it is a mere translation, and this is very dull.

Such, then, were the conditions of Literature and Education in Denmark, previously to the sixteenth century. Concomitant with this miserable *written* poetry, however, there existed a *traditional* poësy; and this was a noble, sweet, luxuriant poësy, which grew up in the middle of the Danish Middle-Age, like a forest of oaks in the centre of a sterile plain. This is the Poetry of the Kæmpeviser.‡ It was long misunderstood by the Wits: the Philosophers despised it: but, no sooner did an intelligent Spirit rescue from oblivion this sonorous harp, this "voice of ancient days," than the multitude listened with delight, the poets poured forth applauses, the learned felt amazement. From that time, Denmark no longer had reason to regard with envy the heroic rhymes of Spain or the border-ballads of Scotland. The Land of Lodbroc now possesses her own *Cancionero*; she now has her own *Minstrelsy*.

* With reference to the original popularity of this fantastic piece of "romanticity," a leonine sentiment occurs in Seidelin's *Pæremia Ethica*, printed at Frankfort in MDLXXXIX: *Quis*, the rhymer inquires, *non legit quas frater Rauschius agit?*

† The original idea of this Romance has been ascribed to Boccacio, but without any reason. It was first introduced into the north by Euphemia countess of Brandenburg, queen of Norway. Now, Euphemia died in the year MCCCXII, and Boccacio was born in A.D. MCCCXIII.

‡ An Essay on the "Kæmpeviser" will appear in a subsequent number of this journal.—ED.

ON THE GEOLOGY OF THE NORTHERN PART OF THE COUNTY OF STAFFORD.

By J. B. JUKES, B.A. F.G.S.

THE geological structure of the northern part of the county of Stafford is so intimately connected with that of Derbyshire that, although my materials are very scanty, it appears better to throw them together in the form of a supplement to my last paper, than to break the connection between the two. The rocks which enter into the composition of N. Staffordshire are precisely the same with those of Derbyshire, with the exception that no toadstone, or other igneous rock, is any where visible. The diluvium also differs somewhat, since there is in Staffordshire a greater abundance of far-travelled boulders than in Derbyshire;* large blocks of porphyry, granite, and other rocks, washed from the mountains of Cumberland, may be seen scattered over the Pottery coal-field and the country to the south, forming part of the great northern drift which has swept a mass of ruins over all the country intermediate between Cumberland and Worcestershire, and some of which have even been carried as far as the Bristol Channel.

In passing from Derbyshire into Staffordshire, little or no change takes place in the character of the scenery. The same high brown or purple moors of gritstone, the same green hills of limestone, and the same richly-wooded tracts of new red sandstone, may be seen in one as in the other county. There is, however, by no means that regularity of structure in N. Staffordshire, considered as a whole, which was observable in Derbyshire. The mountain limestone is confined to a patch on the eastern side of the district,† while the distribution of the shale and gritstone, the coal measures and new red sandstone, over the remainder is, at first sight, very irregular. This distribution will be best understood by marking on a map first, the outline of the mountain limestone, and next, of those parts occupied by coal measures, the intermediate portions being understood to

* Since writing the first part of the Geology of Derbyshire, I have been informed by Mr. Barker, of Bakewell, of the occurrence of granite boulders in Haddon field, and by Prof. Sedgwick of his having observed them on the *summits* of the hills bordering Derbyshire and Cheshire.

† Of course, its appearance on the surface is here meant, as it is believed to underlie all the rest of the district.

be composed of gritstone or shale, except when any of these rocks may be concealed by the overlying beds of the new red sandstone.

Beginning, then, at Berrisford Hall, near Hartington, the boundary of the mountain limestone runs by Narrowdale to Gateham, whence it sweeps round to the north, along the flank of Ecton hill, up to Warlow. From Warlow it runs with an undulating line to the west, to a point about one mile beyond Upper Elkstone, whence it deflects to the S. running nearly in a straight line S.E. as far as Waterfall and Waterhouses. From this point it sweeps round the bold hill of Caldron Low and along the S.W. flank of the Weaver Hills to Ramsor, whence it turns to the N.W. and enters Derbyshire again near Thorpe, at the extremity of Dove Dale.

The principal coal-measure district is that called the Pottery coal-field. This has a triangular form, the apex of which is at Bidulph, the eastern side running thence in a nearly straight line to the eastern corner of the town of Lane End; while the western, after sweeping round the southern extremity of Mole Cop, and enclosing Talk-o'-the-Hill, passes through Audley to the neighbourhood of Madeley manor house. The base runs from Madeley manor house, S. of Newcastle, to the S.E. corner of Lane End aforesaid. A much smaller district, which may be called the Kingsley or Cheadle coal-field, has a somewhat similar shape, the apex of which is at Ipstones, the eastern side passing by Froghall to near Oakamoor, the western running to the west of Dilhorne, and the base being an irregular line passing from the neighbourhood of Dilhorne, by Delph Houses, to the S. of Cheadle, and thence by Hales Hall to the Churnet, just N. of Oakamoor. In the northern corner of the county are several small tracts, where coal is worked, either on the back of the gritstone hills, or in the hollows made by the depression of their beds. Of the latter a remarkable instance occurs about half way between Leek and Buxton, about Goldsitch, where is a small patch of coal measures about $1\frac{1}{2}$ m. long by $\frac{1}{2}$ m. broad.

It remains now to notice the distribution of the new red sandstone. Beginning at Ashbourne, this rock will be found running up the valley of the Dove in a narrow tongue, forming the middle of the valley and also the sides, up to a certain height, as far to the N. as within a mile of Thorpe. Having crossed the valley of the Dove, the boundary of the new red sandstone is found to run towards the S. at the back of Church Mayfield, but shortly to turn N. again, and run in the same manner up the little valley that comes down by Stanton, that it does up the valley of the Dove. From the bottom of this valley the boundary is more regular, running N.

of Ellastone and Wootton Hall, by Farley, to Oakamoor. From Oakamoor the line mentioned before as running S. of Cheadle to a point about one mile west of Dilhorne, is the common boundary of the new red sandstone and the coal-field. From this point the new red sandstone runs up to Cellar Head, and thence by Holme down to Park Hall, near Lane End. The boundary of the Pottery coal-field then becomes that of the new red sandstone along the line by Madeley, Audley, and north of Talk-o'-the-Hill, to the S.W. end of Mole Cop, when the two formations separate again, and the new red sandstone runs into Cheshire, lying at the foot of the range formed by Mole Cop, Congleton Edge, and Cloud Hill. All the northern division of the county S. of the line now traced as running from Ashbourne, by Cheadle and Newcastle, to Madeley, is formed of the new red sandstone, without the appearance (so far as I am aware) of any other rock. To the north of this line all the country not previously included within the boundaries of the mountain limestone and the coal districts, is formed of gritstone and shale. A belt of shale, as usual, surrounds the mountain limestone, and a ridge of gritstone forms the boundary of the coal districts; but the two formations pass too insensibly one into the other to admit of drawing lines of demarcation, except on a map of very large scale, and after much greater time and labour than I have bestowed on them. Within the district thus occupied, however, there is yet to be noticed a very remarkable outlier of new red sandstone. From a hamlet called Fould, about two miles N. of Leek, down to the borders of the Cheadle coal-field about Consal, the valley of the Churnet is composed of this rock, which, as in the valley of the Dove above Ashbourne, forms the bed of the brook, and rests against the neighbouring hills up to a certain height, occasionally perhaps two hundred feet above the level of the river.* The same thing takes place, too, in a lateral valley that comes in from the W. below Cheddleton; new red sandstone is found up it as far at least as the village of Endon, which stands on an eminence composed of that rock. Another outlier of new red sandstone, but smaller and nearer the main mass of the formation, is that covering part of the Cheadle coal-field, and on which the town of Cheadle itself stands.

The structure of the districts thus mapped out, and the position of the beds of which they are composed, is well worthy of a more accurate examination and description than they have yet received. All I can do, however, is, to give a few hints respecting them.

* The town of Leek itself stands upon new red sandstone.

The mountain limestone is, no doubt, much broken by faults, some of which are very conspicuous and apparently of great magnitude; but, nevertheless, one of two things must be the case, either there exists no toadstone whatever, and the Staffordshire limestone is one undivided mass, or else there are no faults of sufficient magnitude to bring it up to the surface. It is, perhaps, more likely that the former should be the case than the latter. Another circumstance strikes us very forcibly in Staffordshire, and that is, the greater abundance of extraordinary contortions in the beds of limestone than is generally visible in Derbyshire. Whether this circumstance be an evidence of greater disturbing force, however, or of a modified exhibition of it, I am not prepared to say. Along the whole of that most lovely valley of the Manifold, from Warslow to its junction with the Dove below Islam Hall, these contortions are continually exhibited, but most especially where the river cuts through the north end of Ecton hill, a continued succession of saddles and curves being there shewn, which make it appear that the whole district is puckered, as it were, into small ridges and furrows running generally north and south, but having others crossing them at various angles.—(See diagram). It is probably to this continually arched position of the beds that the singular phenomenon is due of the sudden engulfing of a brook and its re-appearance after a few miles, which takes place in two or three instances in this district. The great richness in mineral products, too, of Ecton hill, and some other spots, may possibly be partly dependent on the fractured state of the rocks. It is remarkable, however, that copper, which is almost unknown in Derbyshire, should be the most abundant metal in many of the mines of N. Staffordshire.

The quarries at Waterhouses, half way between Leek and Ashbourne, is another place where the broken and disjointed and variously-arched position of the limestone beds may be well seen; and indeed hardly any considerable quarry or face of rock can be visited without seeing some curve or contortion exposed. Throughout all this disturbance, however, the action of some general law regulating the direction of the forces, can be traced in the fact that an inclination of the beds towards the N. or S. is very rare, almost every dip being E. or W. or within at most 45° of those points.

The large tract composed of the shale and gritstone has been affected in the same way as the limestone district, many changes of dip, and frequent steep inclinations of the beds, being constantly met with, and many great faults, no doubt, existing, whose situation is not so obvious. The direction of these inclinations corresponds

with those before mentioned, and a careful examination would no doubt detect numerous anticlinal and synclinal lines running across the country, with an approximately N. and S. direction. An anticlinal line, running N. and S. by Wetley Rocks and Cellar Head, certainly separates the Cheadle coal-field from that of the Potteries for some distance, as by Cellar Head shale may be seen, containing a bastard limestone, at the top of the hill, the gritstone dipping rapidly from it on either hand. How far, however, this line may run to the S. is unknown, on account of the overlying beds of the new red sandstone concealing the carboniferous rocks from our inspection. On the other hand, the position of synclinal lines in this direction, or lines towards which the rocks *bend downwards*, is marked by the position of the coal-fields themselves, which of course lie in troughs formed by the bending downwards of the gritstone rocks on which they rest. The small patch of coal measures mentioned before as occurring at Goldsitch, lies in a deep hollow of the gritstone rocks, which rise rapidly from under it on every side into lofty hills, more especially to the W. and S. on which sides the summits of the hills exhibit great beds and ledges of rock, whose rapid dip towards the valley may be seen a mile or two off. The coal measures themselves, of course, follow the position of the rocks on which they rest, and, being horizontal in the centre of the basin, crop out on every side at an angle of 30° , except towards the N. where they are cut off by a fault. One bed of coal is here worked, which for a short distance is five or six feet thick: there are two others, neither of which exceed two feet. The northern part of the Cheadle coal-field, about Kingaley, contains three beds of coal, the thickest of which is three feet; the beds are very nearly horizontal, what slight inclination there is being towards the N.W. S. of Cheadle, however, and about Delph Houses, five beds of coal are worked, the uppermost of which is six feet thick, the whole section having a thickness of one hundred and six yards, and over this part the inclination is S.W. the beds dipping at the rate of one in nine. At Dilhorne, I believe, similar beds are worked, but they here crop both to the N. and W. shewing that the anticlinal line mentioned before as passing by Cellar Head, throws out the beds on this side, and thus far, at least, produces a real separation between the Cheadle and Pottery coal-fields.

Concerning that far more extensive district, the Pottery coal-field, I regret that all the information I was able to procure is exceedingly scanty, owing partly to my own want of time, and partly to an absurd jealousy which still lurks in that district, with respect

to affording the inquirer any information on the subject. From what I could collect, the beds of coal are very numerous, and several of them upwards of six feet in thickness; but, if the different accounts were correct, great changes must take place, both in the thickness of the different beds, and the distances between them in different parts of the field. Mr. Heath, of Kidcrew, was kind enough to give me a section of the Hurecastle tunnel, in which a total thickness of upwards of three thousand feet of coal measures was cut through, containing twenty-eight beds of coal, whose thickness was altogether between sixty and seventy feet, and in which section neither the highest nor the lowest known beds are included. As, however, no mention is made of the occurrence of faults, I think there must probably be some mistake, and that some faults must have been unobserved by which a repetition of some of the beds was occasioned, producing this apparently enormous thickness of measures. The position of the beds in this coal-field is highly remarkable. Along the whole of the eastern portion, from Biddulph, through Burslem and Hanley, to Lane End, the beds dip west at an angle of 33° , on the average; but on proceeding two or three miles in that direction the beds are found to rise again, and in the country between Newcastle and Kidcrew they dip to the east at a similar angle. On the extreme western boundary of the district, however, they again recover their westerly dip, and plunge under the new red sandstone plain of Cheshire. About Kidcrew and Talk-o'-the-Hill the beds are greatly broken and shattered, one portion lying horizontal, perhaps, whilst its immediate neighbours dip E. or W. at the rate sometimes of eleven inches in twelve, or nearly 45° .* The direction of the chief line of fracture coincides with that of the ridge of hills called Mole Cop, Congleton Edge, and Cloud; and on examining these we find still stronger evidence of the action of the disturbing power. Along the W. side of Mole Cop, the upper beds of the mountain limestone begin to shew themselves near the base of the hill, and are worked at one or two points, having the shale above them, which is capped by the millstone grit. These two latter rocks compose the remainder of the ridge, their beds dipping to the E. and forming a clear escarpment to the W. Along this part of its course, then, the elevating force has not merely tilted the beds into a highly inclined position, and left them leaning against each other, as it were, for support, but has broken them clean through

* The workmen call the E. and W. inclinations "the Staffordshire dip" and "the Cheshire dip" respectively.

and lifted those on the E. side up into the air, while those on the W. remain buried at an unknown depth below the plain of Cheshire. If we compare the position of the rocks (such as it appears from even these brief notices) on the western side of the Penine chain,* with that of the same beds on the eastern, we shall be struck with the remarkable preponderance in the magnitude of the faults and dislocations of the former over those of the latter. This violently fractured state of the rocks on the western side of the district, and their comparatively undisturbed condition over the eastern portion, is true for the whole of this great range, and the ridge of Mole Cop is but a minor representation of Cross Fell.

In deducing from the examination of its structure a geological history of the district, the same remarks will apply to N. Staffordshire as to Derbyshire. We have, however, in Staffordshire, more striking evidence of the period intervening between the formation of the carboniferous system and the upper part of that of the new red sandstone, and of the great forces, both of dislocation and degradation, which were at work in the interval, than can be seen in Derbyshire. The fact of the new red sandstone running up the valley of the Dove and lying for several miles along that of the Churnet, following their windings, and resting with its horizontal beds against their broken and eroded banks, shews in the most striking manner that the carboniferous rocks had been elevated and disturbed, and these very valleys had been scooped out in them, before the deposition of the new red sandstone. The valleys seem, indeed, as if they had been arms of the sea running, like some of the Scotch lochs, into the dry land,† during the new red sandstone period, before which they must have been deeper than they are at present. During this period they were filled with new red sandstone up to a certain height, which at some subsequent period has itself suffered from an eroding cause, and the beds of the present rivers have been thus formed. These facts are important, as teaching us to look to a very ancient period for the beginning, at least, of those deep dales and ravines which cut through the mountain limestone and other hard rocks, and whose erosion seems impossible by any forces with

* The Penine chain is a term given by Phillips and Conybeare to the great central ridge of hilly country that runs from Derbyshire and Staffordshire to the borders of Scotland.

† It is by no means meant positively to assert that the hills of Staffordshire and Derbyshire were dry land during this period, though several arguments might be brought forward to render such an idea probable.

which we are acquainted, unless acting through very long periods of time.

Concerning the very important practical question of the extension of the coal-measures beneath the new red sandstone districts, I am not at present prepared to offer any thing farther than was stated in the last number, except that some facts I met with tended to confirm me in the opinion of the present boundaries of the coal-fields, when ending abruptly against the new red sandstone, having been formed by denuding and eroding forces acting before the deposition of that rock, rather than by direct fractures and dislocations having marked them out, either before or since. If this opinion should be correct, the existence of coal measures beneath any part of the new red sandstone can only be determined by direct experiment, since we have no means of inferring to what depth eroding forces may have acted. It is, at all events, a circumstance well worthy of cautious examination before entering into an expensive undertaking in search of coal beyond the present fields.

OBSERVATIONS ON THE NATURE OF HEAT.

THE word heat, as used in common language, expresses a cause and its effect ; it expresses the sensation of heat and the cause of that sensation : hence philosophers, to avoid looseness of speech, have determined to strip the word of its two-fold meaning, and to confine it to the sensation, while, for the cause, they have framed a new word, viz. caloric. This distinction, I conceive, will appear sufficiently important to adopt it in the following remarks.

When the attention is first drawn to this subject, it may possibly be thought an easy matter to determine the nature of a principle so universal as caloric ; but that men of the greatest fame in science differ in opinion upon its nature, will be ample refutation of the simplicity of the question. At present there prevail two opinions : the one is, that caloric is a subtle fluid, capable of entering into bodies and of being emitted from them ; the other, that it is merely caused by the motion excited among the particles of matter ; or, in other words, the one holds that caloric is material, while the other, that it is merely a property of matter. In entering upon this inquiry, it

will be necessary to consider how far caloric corresponds with our ideas of matter; then, which of the hypotheses gives the most plausible explanation of the phenomena dependent upon caloric.

If we adopt the opinion, as many do, that whatever is capable of acting upon our senses is material, the question is at once settled; but, to give greater scope to the argument, it will be better to fix upon some characteristics common to all matter, and then to find if there is any thing in caloric resembling or approaching to these. Extent and impenetrability are chosen as the indisputable characteristics of all material objects. The first implies, that every atom of matter must occupy space; the second, that no two atoms can occupy the same space in the same precise instant of time. "Were this latter proposition otherwise," says Sir John Leslie, "each body or atom might be successively absorbed into the substance of another till the whole frame of the universe, collapsing into a point, were lost in the vortex of annihilation."

Does this general and common characteristic of matter, extent, apply to caloric, or does caloric occupy space? It decidedly occupies space: for most bodies, by an increase of density, give out caloric; or it is a general law, with a very few exceptions, that bodies passing from a larger to a smaller bulk evolve caloric; or the reverse, bodies passing from a smaller to a larger bulk necessarily absorb, or take in, caloric. Thus, according to the experiments of Mr. Watt, water, by conversion into steam, is enlarged about 1800 times. It may be urged that this is all very plain when caloric is viewed in connection with matter; but does it occupy space unconnected with matter, as we can conceive an atom or a number of atoms of any elementary substance to do? This question certainly cannot be answered with the same clearness as that respecting caloric in connection with material objects. That it can, however, be answered in the affirmative, will be abundantly evident to any unbiassed mind who considers the following fact: the transmission of caloric in *vacuo*, as shewn by Pictet, by placing a thermometer in the exhausted receiver of an air-pump; and by Count Rumford, by placing the same in a Torricellian vacuum, the most perfect that can be found. Now, whatever passes through a complete void naturally occupies a portion of that, unless it be analogous to mental phenomena, which few would be willing to admit of caloric. Therefore, with the idea that caloric is material there is nothing preposterous in saying that extent is one of its essential properties.

The other essential property of matter is impenetrability, or that

no two bodies can occupy the same space in the same moment of time. For example, if a piece of wood or metal be plunged into a vessel filled to the brim with water, a portion of the water will overflow, exactly equal to the bulk of wood or metal immersed. To apply the same experiments to caloric, with our present knowledge of its nature, would be impossible; but there is evidently something very analogous, as is shewn in the following experiment by the distinguished chemist Berthollet:—"He took pieces of gold, silver, copper, and iron, equal in size, and submitted them to the stroke of a coining press when he ascertained the heat produced by each stroke, by throwing the pieces into water, the relation between the degree of heat given to the water, and the heat previously in the metal having been found by experiment." So he was able to ascertain how much the temperature of each piece had been raised; and the conclusions are these: each piece gave the greatest quantity of caloric out at the first stroke, less at the second, and still less at the third; besides, there was a close connection between the caloric produced by each blow and the reduction in size of the metal. Now, from these facts, I think, we may fairly infer the point at issue. Each piece of metal underwent the greatest diminution, and gave off the greatest quantity of caloric at the first stroke; there was less diminution and less caloric, at the second stroke; and still less of these at the third stroke. The particles or atoms of the metal would, on the first stroke, approach nearer to each other, whereby something, if any thing existed between the particles, must be thrown out, and that something may be caloric, which the increase of temperature seems to support. After the first stroke, the distance between the particles would be less, consequently there must be less of any thing between them; hence less contraction and less of anything to thrust out on the second stroke; and so with the third stroke. This argument may be met by saying, that there is no caloric in cold metal, at least not so much as to explain the quantity that can be produced in percussion. Our senses, or the most delicate thermometer, indeed, cannot inform us of the actual quantity of caloric in any body. The information these give us is only relative, and our knowledge of the subject has been compared to a person knowing a few links in the middle of a chain, while the extremities are removed from his view. So in the metal there may be much caloric, not to be detected by our senses or our instruments, capable of being evolved on compression, as the latent heat of steam is evolved on the condensation of the same. I am aware that, in hazarding this remark,

I am treading upon novel and very uncertain ground ; but it is not more against reason, unaided by experiment, to suppose that any body will give off caloric, whether latent or in any other form, on the application of a suitable cause, than to suppose steam, which conveys to our senses or the thermometer a temperature no higher than boiling water, should, on its condensation, give off nearly 1000 degrees more than is contained in boiling water. I say, the one supposition is not more plausible than the other by reasoning simply. Though the one is known from its effects, the other may possibly be explained when our knowledge of the subject becomes more accurate and our instruments more delicate.

On the whole, the increase of temperature on the metal being condensed, and the temperature always being in proportion to the condensation, seem to resemble much the overflowing of a vessel filled to the brim with water, on plunging any body into it ; and if the latter fact be a proof of the impenetrability of water, the experiments of Berthollet, if they do not *prove* the same with regard to caloric, afford, at least, presumptive evidence in its favour.

I come now to consider which of the hypotheses gives the most satisfactory explanation of the phenomena dependent upon caloric. It is a law nearly universal for all matter to expand by the addition of caloric : solids and fluids both observe this law. On this expansion something must enter between the particles, else there must be a vacuum ; and on the supposition that there is a vacuum, how does it happen that the atmosphere does not follow its usual law, and rush towards the unoccupied space ? If it did enter between the particles of the expanded body, it is natural to suppose that the weight of that body would be increased ; but the following experiment of Dr. Fordyce shews that increase of weight does not necessarily follow an increase of temperature. He put 1700 grains of water into a glass globe three inches in diameter, and sealed it hermetically, and then ascertained the weight of the whole. He next plunged the globe into a freezing mixture, where he kept it till part of the water was frozen, which he again weighed ; and on comparing the weight of each trial, he found that the frozen water had gained about 1-60th part of a grain. These trials were repeated several times, more of the water being frozen each time, when a corresponding increase of weight was obtained. This would seem to prove that the weight of a body became less on the addition of caloric ; and were ponderosity reckoned one of the properties of matter, it would militate against the materiality of caloric : but as this property is merely relative and

susceptible of change, it cannot upset the idea that caloric is material.

The radiation of caloric is a sufficient proof, were there no other, that it is material. It passes through space in straight lines; it can be reflected at will, and collected into a point, so as to resemble the condensation of bodies confessedly material. It is scarcely possible to conceive that this would arise merely from the commotion of the particles of a body, for the hypothesis implies the greater the commotion the greater is the quantity of caloric; and there is no evidence that the commotion of the particles upon which it is concentrated is greater than those from which it is reflected, unless the increase of temperature be taken as such; besides, the point from which the caloric emanates, and the point upon which it is concentrated, may be under nearly similar circumstances with regard to this agent, yet they must be governed by very different laws: the former being increased in temperature from the commotion of its particles; while, in the latter, the increase of temperature causes the commotion among the particles, or, in other words, what is the cause in one point is the effect in the other.

How ill adapted, then, must the hypothesis be that requires the aid of opposite laws to explain the same phenomena in the same matter! The like reasoning is applicable to the conduction or the communication of caloric from one body to another; but with the idea that caloric is material, the phenomena of radiation and conduction admit of easy explanation.

The hypothesis, also, of its material nature, gives a satisfactory explanation of the phenomena attendant on the conversion of solid substances into fluids or gases, or the reverse: in the former, caloric is absorbed; in the latter, it is given off. How great is the resemblance between this and the absorption of a fluid by a sponge or any porous body, and the escape of that fluid on pressure.

There are, however, some instances in nature, contrary to the general rule, where caloric is produced on the conversion of a body from a smaller to a larger bulk. Of this, the explosion of gunpowder is an example, and which is brought forward against the idea of the material nature of caloric. But the fact proves nothing, save by analogy; and if analogy have any weight, there is as much reason to suspect that caloric, as matter, is lodged among the particles of this astonishing product, ready to burst forth on the application of a suitable cause.

A similar objection may be raised from the fact that water, on

cooling from 40° to 32° , Fah., expands: but this is accounted for on a different principle. It is generally supposed that the crystals which are formed on the water becoming ice, observe a particular arrangement, or that the coaptation among them is not such as to occupy the least possible space. Were this law otherwise, the lakes and streams, in severe winters, particularly in northern regions, would be rendered one complete mass of ice; in short, the fountains of the deep would be dried up, and man would have only a precarious supply of this indispensable requisite. But as it is, water, on cooling from 40° to 32° , expands; it therefore becomes lighter, and swims above the heavier. The particular arrangement of the crystals, as already mentioned, will explain the enlargement without the seeming paradox of matter becoming larger, or matter being extracted.

The only other comparison which I shall draw between the two hypotheses is derived from the production of caloric by percussion or friction; and this, I may add, is reckoned by some as one of the greatest stumblingblocks to the idea that caloric is material.

They argue that whatever can be generated out of nothing cannot be material. Thus, Dr. Young, in his *Lectures on Natural Philosophy*, says, "If the heat is neither received from the surrounding bodies (which it cannot be without a depression of their temperature), nor derived from the quantity already accumulated in the bodies themselves (which it could not be, even if their capacities were diminished in any imaginable degree), there is no alternative but to allow that heat must be actually generated by friction; and if it is generated out of nothing it cannot be matter, nor even an immaterial or semi material substance." The first of these propositions is admitted, as it can bear the test of experiment; but the second is a mere assumption, viz., "that the caloric cannot be derived from the quantity already accumulated in the bodies themselves, even if their capacities were diminished." Were we able to measure the quantity of caloric in any body, this supposition might be entertained in preference to one more in accordance with the laws of matter. This, however, we cannot do, with our present information; for any body may contain one degree of caloric, or ten thousand, as our knowledge is only relative. Further, the reverse of this assumption will explain all the phenomena attendant on percussion or friction, without the violation of a single law of physics. Whereas the idea that caloric is merely the consequence of motion, for the support of which the assumption is raised, can only be defended by setting aside an important fact in

the laws of motion. For instance, whenever a *moving force* is applied to any body at rest, part of that force is expended in overcoming the *inertia* of matter; consequently, the power is less efficient than when the *inertia* has been overcome. These facts, however, by no means coincide with Berthollet's experiments with the metals, as specified. The first blow, having to overcome the actual or comparative *inertia* of matter, would naturally, on this view, afford least caloric, as the motion among the particles would be less than on the succeeding blows; but the reverse was the fact, as the first blow afforded the greatest quantity of caloric. That caloric already existing in bodies is merely evolved on percussion or friction, is an assumption as destitute of proof as that which Dr. Young has assumed; but it does not violate any of the known laws of matter, or rather it coincides with some of those laws which the opposite idea directly sets at naught. Therefore, it is certainly more logical to adopt that opinion which is supported by reasons, though not stronger than analogy, in preference to another not only destitute of analogical reasoning, but running directly counter to what analogy might lead us to expect.

The same author remarks that "those who look up with unqualified reverence to the dogmas of the modern schools of chemistry, will probably long retain a partiality for the convenient, but superficial and inaccurate, modes of reasoning which have been founded on the favourite hypothesis of the existence of caloric as a separate substance; but it may be presumed that, in the end, a careful examination of the facts which have been adduced in confutation of that system will make a sufficient impression on the minds of the cultivators of chemistry to induce them to listen to a less objectionable theory." Notwithstanding the denunciation of being a superficial and inaccurate reasoner, I am induced, after taking a retrospect of all the facts connected with caloric, to consider it material. This view gives the most satisfactory explanation of the greater part of the phenomena dependent upon caloric, though a few of them, as instanced in the case of bodies becoming larger and at the same time emitting caloric, may at first stagger us in this belief, yet if we deal with the subject as is done with the other objects of nature, there can be no hesitation about the conclusion I have drawn: I allude to the formation of a law from the general effect of any body, rather than from the exceptions to it.

The invention of the hypothesis that caloric depends on motion, is ascribed to Lord Bacon; and it is supported by the opinions both of Boyle and Newton. The opinion of such men ought certainly to

make any one pause before he differed from it ; but were mere names to be taken as evidence in scientific inquiries, all improvements would fast be at an end. The only legitimate way of interrogating nature is by observation and experiment, and facts fairly deduced from these are of more value than theories the most beautiful, no matter by whose name they are supported.

BLANCHE DE BEAULIEU ;

A TALE OF THE REVOLUTION.

TAKEN FROM THE FRENCH OF ALEXANDRE DUMAS.

On the evening of the 15th of December, 1793, a strange and fearful spectacle presented itself from the hill which, on the road from Clisson,* overlooks the valley where the village of St. Crepin lies almost hidden among the trees. At first the eye could discover only, in the dim twilight, three or four columns of thick smoke, which, separated at their base, united into one dense mass as they rose, lazily waving in the heavy atmosphere ; then rolling away, mixed with the low and foggy clouds. Gradually the dark vapour became more lurid ; and at length, bursting from the roofs of the houses, the long forked flames usurped its place with a crackling sound ; now, creeping stealthily along ; then, darting spirally upwards, piercing the thick mist which hung over them like a mantle. From time to time, as a roof fell in, a more vivid blaze arose, which, mingled with a thousand sparks, disclosed to view a company of soldiers, whose occasional shouts and bursts of merriment contrasted strangely with the awful scene before them. It was a republican brigade of fourteen or fifteen hundred men ; who, having found the village deserted, had wantonly set it on fire.

One detached cottage, however, was not yet burning. Every precaution seemed to have been taken to prevent the flames from reaching it. Two sentinels stood at the door, and occasionally an officer or aide-de-camp passed in, and returned to transmit orders to

* Clisson, a small town in Bretagne, near Nantes.

the army without. He who issued these commands was a young man, who did not appear to have numbered more than two and twenty years. His long brown hair parted on his forehead, fell in waving curls over his temples and cheeks, which were pale and thin ; and his whole countenance was stamped with that indescribable air of melancholy which, in the eye of superstition, is considered to mark those who are fated to die young. He was bending over a table, and beneath the large blue cloak which was wrapped loosely round him, might be discerned the marks of his rank—the insignia of a general. A geographical chart lay before him ; and by the light of a lamp, which seemed to grow pale in the more lurid blaze of the burning village, he was tracing with a pencil the route his men were to take. It was the young republican General Marceau.

At length the work of destruction was over. The village so lately smiling in its peaceful valley was reduced to a heap of ashes. The groups of men which surrounded it once more forming into column, prepared to traverse the dark and circuitous route which separates St. Crepin from Montfaucon ; and when, some minutes after, the moon shone for an instant from behind the thick clouds, on their glittering bayonets, as they crept almost noiselessly along, they appeared, winding through the darkness like an immense serpent, covered with scales of burnished steel.

Marching to an attack by night is a melancholy thing to an army. War may be glorious to the enthusiast by day, when, amid the roar of the cannon and the clanging sound of conflicting weapons, the martial trumpet excites ardour in the soul, and friends and enemies are by to see how gloriously we fall. But in the deep silence of night, not to know how we are attacked, nor how to defend ourselves ; to fall without seeing who strikes us, nor whence the blow came ; to be trampled under foot in the darkness, surrounded by the dying and the dead, with no friendly eye to pity and no arm to succour us ; these, these are the horrors that often make the boldest heart quail, and the most daring arm tremble. Such thoughts passed rapidly through the minds of many in that army, as they pursued their route cautiously and in silence ; for they knew that a sharp conflict awaited them at the end of a toilsome and difficult march—a battle by night. Marceau himself was their guide ; he had so attentively studied all the localities that he believed himself able to conduct them in safety to the spot to which they were bound, and the event proved he was not mistaken. In little more than an hour they found themselves in the dark gloom of the forest, where, according to the intelligence he had received, Marceau

expected to surprise a number of the fugitive royalists, and some part of their forces, amounting to nearly eighteen hundred men, assembled to hear a mass.

The General now separated his little troop into several columns, with orders to traverse the forest in different directions, and surround the appointed spot on every side. Half an hour, he calculated, would suffice for each party to take up its respective position. One division remained to advance by the way which lay before him, the others separated on each side to pursue their respective routes; the heavy tramp of their steps gradually became fainter and fainter, and at length died away altogether.

The half hour passed quickly, and the word "Forward!" was at length given by Marceau. As they cautiously and gradually advanced, the cross-way which formed the centre of the forest appeared illuminated. On a nearer approach a number of glittering torches were perceived, and soon as every object became more distinct, an unusual sight burst upon their view. On an altar rudely erected by piling together a number of loose stones, the minister of Saint Marie de Rhé was performing a mass; a number of old men encircled the altar, bearing torches in their hands, and round about a crowd of women and children were on their knees, engaged in prayer. Between the republican army and this group, the men were stationed in a thick phalanx, evidently prepared for attack or defence. The royalists did not wait for the onset. They had sharpshooters in the wood, who had already commenced firing on the approaching soldiers, who advanced firmly step by step, without pulling a trigger, or answering in any way the reiterated fire of their enemies. The only words heard were, after each discharge, "Close up! close up!" All this time the priest continued to read the mass, his audience remaining on their knees, apparently unconcerned with what was passing around them. The republican army steadily advanced; when they were within thirty paces of their enemies, the firing commenced; the first rank dropping on one knee, three lines of guns were discharged, making terrible havoc among the royalists, and some balls, passing into the midst, fell at the foot of the altar, killing or wounding women and children in their course. All was instantly cries and tumult. The priest raised the host, and every head bent to the earth in reverential silence. The republicans fired their second discharge at ten paces; as calmly as though they were at a review, and with as much precision as before a target. Neither party had time to reload, but, rushing on, closed with their bayonets; and here the republicans, being regularly armed, had a

decided advantage. The royalists began to give way ; rank after rank fell before their powerful enemies. The priest, perceiving this, gave a sign, and in an instant every torch was extinguished, and the warfare carried on in total darkness. In the midst of the scene of carnage and disorder which ensued, the words " Mercy ! mercy !" were pronounced in a heart-rending voice at the feet of Marceau, who was in the act of striking the soldier now clinging to his knees. He paused. It was a young Vendéen, disarmed, who sought to escape from this terrible conflict. " Mercy !" he repeated, " for the love of heaven, save me !" The General drew him a few paces from the field of battle, to avoid the notice of his soldiers, but was soon forced to stop : the stranger had fainted. Marceau felt surprised at this excess of terror in a soldier, but he nevertheless hastened to assist him ; and on unbuckling his helmet, to give him air, he discovered by the long flowing tresses which escaped that it was a woman he had saved ! Not an instant was to be lost. The orders of the Convention were strict : " Every Vendéen found carrying arms, or joining an assemblage, be their age or sex what it would, was to perish on the scaffold." Placing her under a tree, Marceau hastened back to the field of battle. Among the dead he distinguished a young republican officer, whose height and size appeared to him to correspond with that of the unknown, and, hastily despoiling him of his uniform and helmet, he returned to his charge, whom the fresh air of the night had nearly restored to consciousness. " My father ! my father !" were her first words, as, partly raising herself, she passed her hand rapidly across her brow, as if to collect her scattered senses, " I have abandoned him ! he is killed !" " No, Mad. Blanche," said a voice from behind her, " the Marquis de Beaulieu lives ; he is saved ! *Vive le Roi !*" He who uttered these words disappeared like a shadow, but not before Blanche had recognized the faithful follower of her house. " Tinguy ! Tinguy !" she exclaimed, stretching her arms whence the sound came. " Silence !" said Marceau, " one word will betray you, and then even I cannot save you, though I would wish to do so. Put on these clothes, and wait here." He again repaired to the scene of conflict. The royalists were entirely routed, and many of them taken prisoners. Giving his troops orders to retire towards Chollet, and leaving his colleague in command, he returned to Blanche, whom he found ready equipped to follow him. They directed their steps towards the high road which traverses the forest, where Marceau's servant awaited him with led horses. Here his embarrassment increased, for he feared his prisoner would not be able to manage her

steed so as to use all the expedition he knew was necessary ; but he was quickly re-assured by seeing her vault into the saddle with all the ease and grace of the most accomplished horseman. She smiled faintly on observing his surprise, and said " You would not be astonished, did you know all the circumstances which have made every manly exercise familiar to me." " At some future period I will hear them, said Marceau ; " our object must now be to gain Chollet as quickly as possible : so give your steed the rein, and follow me." He spurred his horse into a gallop, and in half an hour they entered the town. Proceeding to the Hotel de Sans-Culottes, he engaged two rooms, and, conducting his charge to one of them, recommended her to lie down in the clothes she then wore, and endeavour to gain a little of the repose she so much needed, after the horrors of the past night. Youth is a period in which misery appears so foreign to existence that it seems almost impossible to become familiarized with it. Thus, Blanche, notwithstanding the deserted state in which she found herself, could still look forward with hope to the future. The soft voice and elegant figure of the republican general had already made an impression on her young heart. The idea of death—of the scaffold—never once entered her mind, for Marceau had said " I will save you."

The General quickly laid his plans : one only method of saving Blanche appeared practicable, which was to convey her himself to Nantes, where his family then lived. For three years he had not seen either his mother or sisters, and now, finding himself within a few miles of their residence, he determined to wait immediately on the general-in-chief, to acquaint him with the success of his late expedition, and at the same time solicit him for leave of absence. This he obtained without difficulty ; and in a few hours he and his young charge set out on their journey. No sooner did he find himself alone with Blanche, than he claimed her promise of detailing to him the events of her past life ; for he already felt a lively interest in the young stranger so unexpectedly thrown upon him for succour. With a touching simplicity she related the following circumstances. Having lost her mother when very young, she had become the sole companion of her father, the Marquis de Beaulieu ; and was accustomed, from her earliest years, to share with him the chase, and all the manly sports of the age. After the insurrection of La Vendée broke out, she was thus enabled to show her devotion to her fond parent, by following him in the disguise she wore when Marceau found her. Perceiving how deeply the young General was interested in the recital, she went on to relate all the fatigues

and terrors she had undergone from the taking of St. Florent till the night on which he had saved her life. The city of Nantes broke upon their sight as she finished her tale ; and in a few minutes Marceau was in the arms of his family. His first welcome over, he presented to them his young fellow-traveller. A few words were sufficient to interest them in her behalf ; his sisters vied with each other in showing her the most delicate attentions ; and on her expressing a wish to exchange her present dress for one more becoming her sex, conducted her to their apartments, where they assisted her to array herself in a more suitable costume, selected from their own wardrobe.

Prepossessed as the young General was already in her favour by the sweet simplicity, mingled with the womanly dignity, she had displayed throughout their intercourse, he could not conceal his admiration when he beheld her striking beauty, as, on returning to the room, she smilingly extended her hand towards him. Blanche could not but perceive the impression she had made, and a sensation of delight arose in her mind as she did so. For the first time in her life she became conscious of the full value of personal charms ; and she inwardly thanked heaven for having so plentifully bestowed them on her. All was joy and happiness under one roof in Nantes on that evening.

Days passed rapidly on. Every hour Marceau became more convinced of the danger of remaining in Blanche's society, yet found it impossible to tear himself away. It was vain to attempt to conceal his passion ; it was visible in his every look and action. On one occasion he presented to her the most costly ornaments, but she could not be prevailed upon to accept any. "Do jewels become my situation ?" she replied sadly, "while my father is probably begging his bread from cottage to cottage, a homeless outcast, with a price set on his head ; myself a proscribed fugitive ! No ! my simplicity will hide me from observation, and remember, discovery would be ruin." Then, on seeing how much he was hurt by her refusal, she said more gaily, "Well, then, I will take *this*," selecting from the ornaments before her a small artificial red rose, "and wear it in memory of your kindness." A fortnight still remained before the expiration of his leave of absence, when Marceau suddenly received an order to return immediately to his regiment, and join the army in the west of France. He was astonished and dismayed beyond measure at this unexpected command. One thing was certain—it must be obeyed ; to hesitate was to be lost.

Must he, then, leave her who had become dear to him as his own

soul? for whom he would have gladly sacrificed every thing but honour? Must he leave her, alone and unprotected, in a city through the streets of which daily flowed the blood of those unhappy victims who were, like her, obnoxious to the republican government? Blanche was present when the order was given to him, and perceiving his agitation, hastily enquired what had discomposed him. Without a word, he put into her hands the document he had just received. She saw in a moment the danger to which he would expose himself in neglecting to obey it, and, though her own heart beat violently as she spoke, she enforced upon him the necessity of his instant departure. Marceau gazed on her scornfully. "And can you, too, Blanche, command me to go?" he said: and then, starting up, paced the room with hasty strides, muttering to himself, "Fool! madman that I am, to have imagined she would regret my absence! How could I dream that she would regard me with any other feeling than indifference?" A stifled sob met his ear. Unable any longer to restrain her emotions, Blanche had burst into tears, and was now weeping violently. In an instant he was by her side.

"Pardon me, Blanche; pardon my impetuosity!" he wildly exclaimed, "for I am very, very wretched, and misery makes us reckless." Then, taking her trembling hand, he continued, in a calmer voice, "The war we are now waging, Blanche, is a cruel and deadly one: it is more than probable we shall never meet again. I have always had a presentiment that my life would be a short one. If I fall, promise me that I shall not be altogether forgotten by you—that a thought of me will sometimes recal to your memory the transient dream of happiness from which we have been so suddenly awakened. For myself, Blanche, I can only assure you that if, between life and death, there is time for these lips to breathe one word, it will be your name." Blanche could not speak, but Marceau read in her eyes a thousand more tender promises than that he had required of her.

The necessary orders for his departure were given, and in an hour afterwards he had quitted Nantes. His road lay in the same direction as that which he had so lately traversed with Blanche by his side, therefore every object he passed only served to recal her more vividly to his memory. Was it possible that one little month back he had never seen her? And now, a new existence seemed opened to him. He thought of the unprotected state in which he had left her, and a terrible misgiving came across his mind. He reined in his steed, and felt half inclined to return to Nantes, and

convey her to a place of greater security ; but he reflected that by so doing he should probably excite suspicion, and with a deep sigh he proceeded slowly on his way.

About three leagues from the city he stopped at a village to give his horse some refreshment, and as he was remounting he fancied he heard his own name called. Marceau paused. In a few moments he distinctly heard it repeated, and at the same instant a man vaulted over the hedge behind him, and, rushing forwards, fell at his feet, with only strength to murmur "Thou art betrayed—she is arrested !" It was the faithful Tinguy. "Arrested? Who? Blanche?" cried Marceau.

The man made a gesture in the affirmative: he could not speak. He had travelled three leagues on foot to overtake the young General, and when he reached him his strength was totally exhausted. Marceau seemed bewildered; he gazed wildly on the peasant, a convulsive shudder ran through his frame, and he repeated vaguely, "Blanche arrested? My Blanche arrested? I see through it all now," he at length murmured, in a hoarse whisper; "this, then, is the motive of my being sent away! I must return instantly to Nantes: I will save her, or perish in the attempt! Fool! idiot! dupe that I was, to leave her! Blanche arrested? Where, then, have they taken her?"

Tinguy, to whom this question was addressed, was still lying on the spot where he had at first fallen. Every vein in his body appeared swollen almost to bursting, his eyes seemed starting from their sockets; and on the question being repeated to him he had only power to whisper, "To the Prison de Bouffays."

No sooner were the words uttered than Marceau sprung on his horse, and was in a few moments lost to sight. In an inconceivably short time he re-entered Nantes, and repairing to the "Place de Cours," stopped at the door of the house in which the *famous* (or rather *infamous*) Carrier* resided. With the air of one who ex-

* Member of the "National Convention," and its representative in Nantes, whose indiscriminate slaughter and unrelenting barbarities have rendered his name atrociously celebrated. The Vendéens, the royalists, even those whose only crime was want of zeal in the republican cause, could not have a more implacable enemy than Carrier, who was to Robespierre what the hyena is to the tiger, and the jackal to the lion. This was the monster who, finding the guillotine too slow for his savage purposes, invented "*les Noyades*,"† a species of barges, with false bottoms, by means of which hundreds of his victims were drowned at a time. Carrier perished on the scaffold in the year 1794.—(From Turreau's *Histoire de la Guerre de la Vendée*.)

pects and has a right to be obeyed, he demanded an audience, but, to his dismay, was refused admittance ; and neither entreaties nor threats could procure him an interview. What was now to be done? There was not an instant to lose ; for in those times of horror it was no uncommon occurrence for the unhappy victim to be arrested, condemned, and executed, in the short space of twenty-four hours. Marceau reflected an instant, then, giving his horse in charge of a soldier who stood near, he bent his steps towards the prison where Blanche was confined. The name and rank of the young General were sufficient to obtain him an immediate entrance there, and he commanded the gaoler to conduct him instantly to her dungeon. The man hesitated ; but Marceau repeated his order in a more peremptory tone, and, no longer daring to refuse, he made him a sign to follow, and led the way.

"She is not alone," said he, as he threw open the low arched door of the dark cell, "but she will soon be rid of her companion, for he is to be guillotined to-day." Then enjoining him to shorten his interview as much as possible, he closed the door on Marceau, leaving him in nearly total darkness. Unable to distinguish any object, he groped along the wall, endeavouring to utter the name of Blanche, yet unable to articulate a word ; but she, more accustomed to the obscurity, recognized him immediately, and with a joyful cry sprang forward. In an instant she flew into his arms, forgetting in her terror every thing but the delight of seeing him again. She clung convulsively to him, murmuring, almost inarticulately, "You have not, then, abandoned me ! Among the crowd which followed me here, I perceived Tinguy, and cried out Marceau ! He disappeared. I had no hope that he would find you—that I should see you again : but you are here, you are here ! and you will not leave me in this frightful place. You will carry me hence, will you not ?" "I would do so this instant, even at the price of my own life ; but—" "Oh, Marceau ! look at these dripping walls, this noisome dungeon floor. You, who are a general, cannot you—?" "Listen to me, Blanche. 'This I could do : knock at the door of your cell—blow out the brains of the man who would open it—carry you into the court—restore you for a few minutes to the fresh air and the light of heaven—and then die in your defence. But were I dead they would drag you back to your cell ; and there exists not in the world another man who can save you.'" "And can you, Marceau ?" "I will try, Blanche. But in your turn answer me a question ; one on which your life and my own depends. Answer me, then, as you would before your God—

Blanche, do you love me?" "Is this a time or place, Marceau, for you to ask or me to reply to such a question?" "Yes, Blanche; for we are between life and death, time and eternity. Answer me quickly, for now every moment becomes a day, every hour a year.—Blanche, dost thou love me?" "Oh yes, yes!" she exclaimed, and hid her blushing face in his bosom. "It is enough!" said Marceau. "this instant, then, you must accept me for your husband." She started. "In the name of heaven, what is your design?" "To snatch you from death; we will see if they will dare to carry to the scaffold the wife of a republican officer." Blanche now perceived the motive of his proposition; but she trembled at the idea of the danger to which he would expose himself in saving her by this means, and, recalling all her courage, she replied firmly, "Marceau, it is impossible." "Impossible?" he exclaimed, "impossible? and why? Is this a time, Blanche, for displaying any false feelings of delicacy, with the scaffold, the axe, the executioner, awaiting you?" "No, no!" cried the unhappy girl, "not so; it is for thee I tremble, Marceau. I do not dread death; for God knows that, with the exception of one bright and transient gleam, my short life has been full of misery and sorrow, and I am ready to drain my cup of bitterness even to the dregs, if it be *His* will: but I *cannot*—*will not*—bring disgrace on your name." "So this is your motive for rejecting the only hope you have left! Then listen to me, Blanche. You refuse to accept of safety at my hands; but you cannot drive me from you. Your fate shall be mine: no human power shall separate us. The words '*Vive le Roi*' will be sufficient to close upon me the doors of your dungeon—will sentence me to share with you the scaffold and the grave!" "Oh, cease! in pity cease! Go, Marceau; leave me to my fate!" "Go! you bid me leave you! Blanche, I swear by heaven that if I go hence without your giving me the right to defend you, I will seek out your father, your bereaved, your heart-broken father. I will say to him, "Thy daughter could have saved herself, and would not. She willed that your last days should be embittered. She has brought down your grey hairs with sorrow to the grave. Ay, weep! weep, old man! not for the loss of thy daughter, but that her love for thee was not strong enough to make her wish for life." Then, taking her hand, he exclaimed passionately, "Oh, for pity's sake! by all you hold most sacred in the world, Blanche, Blanche, consent to become my wife! There is no other hope for you—you *must* not, *ought* not to reject it!" "You *ought* not!" interrupted a strange voice from the further extremity of the dark cell; "for religion forbids us to sacrifice

our life when it is in our power to preserve it ; and I am ready this instant to join your hands."

Both started as though they had heard a voice from heaven ; and, turning round, Marceau recognized in the stranger, who had now advanced towards them, the venerable minister of Sainte de Rhé. "Blanche de Beaulieu," continued the priest, more solemnly, "in the name of thy father (whom my age, and the friendship which united us, give me the right to represent), by the love you bear him, I adjure you to yield ; were he himself here he would command it." Her bosom heaved with conflicting emotions ; she hesitated an instant, then, unable longer to resist their united appeals, threw herself into the arms of Marceau, exclaiming convulsively, "I am thine ! I am thine !" while he, clasping her to his breast, mingled his tears with hers. The voice of the priest recalled them. "We must lose no time, my children," said he, "for my moments are numbered, and delay may prove fatal." Taking Blanche by the hand, Marceau gently led her towards a spot where a few rays of light, struggling through a small loop-hole, rendered the darkness less obscure ; and there, falling on their knees, they awaited in silence the benediction of the priest. A feeling of superstitious awe involuntarily rose in their minds, as the walls echoed back the solemn words which were now, for the first time, uttered in that dreary cell, and the voices of both trembled as the holy vow passed their lips. Stretching his arms over their heads, the priest was proceeding to pronounce the final prayer and benediction, when a sound of arms and voices from the corridor startled them. The affrighted Blanche buried her face in her hands, exclaiming "Are they come already to fetch me ? Oh, my God ! how frightful does death appear at such a moment !" The General started up, and threw himself before the door, a pistol in each hand. The soldiers drew back. "Be not alarmed," said the priest, "It is me they seek. I am prepared for death. On your knees, my children," he continued, in a loud voice, "on your knees ; for with one foot in the tomb I will give you my blessing ; and the last blessing of a dying man is sacred." The astonished guards surrounded the group in silence, while, taking from his bosom a small crucifix which he had concealed there, he held it aloft, and slowly, impressively, uttered his parting benediction. Then, after a few minutes solemn silence, which none dared break, he turned to the soldiers, saying firmly—"Proceed ; I am ready." The thick door swung heavily back on its hinges, and in another instant the young General was left alone with Blanche.

Aware that every minute was precious, and that the least delay might frustrate the great object he had in view, Marceau prepared to leave the trembling girl who still clung to him for support, yet feared to tell her that he must go. She read his thoughts, and, throwing herself before him, clasped his knees convulsively, crying wildly, "Oh, Marceau! do not leave me! for God's sake, do not leave me in this terrible place! What will become of me if they come to drag me hence, when thou art not here to defend me? Imagine thy Blanche, thy *bride*, on the scaffold, and thou far away, unable to hear her calling on thy name for help, unable to raise an arm in her defence! Oh, my God! what will become of me?" "Blanche, I am certain of saving thee: I will answer for it with my life. Ere to morrow evening I shall be here with thy pardon. They *will* not—*dare* not—condemn you before that time; and then we will think no more of dungeons and death, but of life and liberty, happiness and love."

The door opened, and the jailor entered to conduct Marceau from the prison. Gently disengaging himself from Blanche, who had thrown her arms round him, he imprinted one long kiss on her fair brow, and without trusting his voice to utter another word he tore himself away. In less than a quarter of an hour the General was on his road to Paris. His known wealth and high rank were sufficient to procure for him instant attention at every place on his route, and he easily obtained promises that horses should be ready for him the next day, in order that no obstacle might delay his return. At a very late hour his carriage entered the city, and proceeding up the "Rue St. Honoré," he stopped at the door of No. 366, and demanded to see the citizen Robespierre. "He is not yet returned from the '*Theatre de la Nation*,' was the reply of the attendant. "Well, then, I will seek him there; if I am unsuccessful, I will return and wait for him here." "And your name, Sir?" "The citizen General Marceau." Cursing in his heart the volatility of his nation, which even at such a time had not lost its relish for amusements, Marceau bent his steps towards the theatre, and was fortunate enough to meet with the object of his search immediately as he entered the corridor. On introducing himself by name, Robespierre extended his hand to the young General, and, with a smile, asked what he would demand of him. "An interview of a few minutes," said Marceau. "And when?" "This instant," was the reply. Wrapping his large mantle around him, Robespierre made him a sign to follow, and rapidly led the way towards his own residence,

himself calm and indifferent, his companion anxious, restless, and agitated.

"This, then, was the man who held in his hands the fate of Blanche; the man of whom he had heard so much, and whose popularity appeared a problem. He had employed none of the means made use of by his predecessors to raise himself to his present distinction; he had neither the captivating eloquence of Mirabeau, nor the plausible sophistry of Barrère, nor the wild impetuosity of Danton, nor the loose eloquence of Hébert. In the midst of the universal disregard of language and dress which prevailed, he had preserved his pointed and studied expressions and elegance of costume. In fact, while the others had laboured to embody themselves with the mob, his constant endeavour had been to make them feel his superiority; and one saw at a glance that this singular man must be the *idol* or *victim* of the multitude. He was *both*.

Arrived at their destination, Robespierre led the way up a narrow staircase to a small room on the third floor. A bust of Rousseau, a table covered with books and papers, a secretaire, and a few chairs, formed the whole furniture of the apartment. Robespierre saw the surprise of the young General as he threw open the door, and said with a smile, "Behold the palace of César! What have you to ask of the dictator?" "The pardon of my wife, condemned by Carrier," replied Marceau, gravely. "Thy *wife*? Condemned by Carrier? The *wife* of Marceau—of a republican officer—of my brave Spartan soldier—*condemned*? Impossible!" "It is nevertheless true;" and Marceau proceeded to explain the facts with which the reader has been already made acquainted. During the recital, Robespierre was evidently uneasy, but spoke not a word until Marceau had finished. Then, in a voice stifled with rage, he muttered, "This is how I am always misunderstood, in every place where my eye is not there to see, and my hand to stop, this useless carnage. Much blood must necessarily yet be spilt; still, this indiscriminate slaughter, this—" "But, Robespierre, her pardon—my wife's pardon." Taking a sheet of paper, Robespierre prepared to write, but paused a moment to enquire her maiden name. "Why do you ask?" said Marceau evasively. "It is necessary to constitute her identity." In a low voice, but firmly and distinctly, Marceau replied, "*Blanche de Beaulieu*." The pen fell from the hand of Robespierre. "What!" he exclaimed, "the daughter of the Marquis de Beaulieu, the chief of the insurgents in La Vendée?" "The same." "And how, then, became she thy

wife?" Marceau briefly explained. "Madman! young fool that thou art!" cried Robespierre furiously, "shouldst *thou*—." Marceau interrupted him: "I do not ask reproaches nor advice, Robespierre; I ask only her pardon. Will you grant it me?" "Marceau, will the tie of relationship, the influence of love, never induce you to betray the republic?" "Never!" "If thou shouldst meet the Marquis de Beaulieu himself in battle, face to face?" "I will fight him as I have done before." "And if he should fall into thy hands?" Marceau reflected an instant, and then replied, "I will bring him here, and yourself shall be his judge." "You swear this?" "On my honour." Robespierre again took up the pen. "Marceau," said he, "you have acquired, and deservedly, a high reputation; you have been fortunate enough to gain the goodwill of men. I have long and anxiously desired to know you." Perceiving the General's impatience, he wrote a few letters, then paused again. "Listen," he said, looking fixedly at Marceau; "grant me, in my turn, a hearing of five minutes. I give you a whole life for them; surely they are well paid." Marceau made a sign for him to proceed, and Robespierre continued. "I know I have been calumniated *to* you and *by* you, Marceau, and nevertheless you are one of the few men by whom I would wish to be known and understood; for what does the opinion of those whose judgment I scorn avail me? During the last three years three factions have, in their turn, agitated the destinies of France; the power of each was delegated to a single man, and each has accomplished the mission with which it was charged. The "*Constituante*," represented by Mirabeau, *shook* the throne; the "*Legislative*," headed by Danton, has *overthrown* it. The task of the present convention is immense; for it must not only finish the work of destruction, but remodel and rebuild the structure: and *this* glorious task it is *my* ambition to accomplish. If the Supreme Being but grants me time to perform it, my name will be above every name: I shall have done for my countrymen more than Lycurgus among the Greeks, Numa among the Romans, or Washington in America. If I fall before the time, having accomplished but half my work, I leave a stain upon my name which the other half would have effaced. The revolution will fall with me, and both be alike calumniated. This is what I desired to say to thee, Marceau; for I would wish, in all cases, by some few, at least, to have been understood, that all should not look on my memory with equal horror and detestation: and thou art one of them."

These, and such as these, were the arguments continually em-

ployed by this extraordinary and dangerous man, to exonerate his actions in the eyes of himself and his followers : and herein lay the chief secret of his popularity. He had discrimination enough to discover, and tact to make use of, such professions as were calculated to deceive and propitiate his hearers ; and he *never* lost an opportunity of so doing. His arguments were always full of specious phrases, though destitute of convincing reasons. But it was only in coolly reconsidering them that those whom he addressed felt this ; and he rarely failed to propitiate them, for the time at least, in his favour.

As he finished speaking, Robespierre affixed his name to the paper, and (with a smile such as he well knew *how* and *when* to assume) held it towards the young General. Marceau took the precious document, and warmly pressed the hand which gave it. He would have poured forth the thanks which rose to his lips, but tears choked his utterance, and he could not articulate a word. Robespierre was the first who broke silence. "You must be going," he said, "there is not a moment to lose. Adieu !" Marceau once more pressed his hand ; then flew down the stairs, and rushed into the street. His carriage was awaiting him with fresh horses ; and putting gold into the postillion's hand, he exhorted him to use all the expedition in his power, and flung himself back on the seat. What a terrible load seemed removed from his heart ! What happiness awaited him ! What a calm felicity would succeed the stormy troubles which had so lately surrounded him ! His imagination pierced into the future, and he pictured to himself the moment when he would throw open the door of that dark cell, and cry, "Blanche, you are free ! I have saved you ! Come, my Blanche, and by your love repay me the debt of life !" From time to time, however, a vague misgiving crossed his mind, and a cold shudder crept over him. Then he urges the postillions to redouble their speed ; promises them gold, rewards beyond their utmost expectations. The horses tear along, striking incessant sparks of fire from their hoofs ; and yet to his excited imagination they scarcely advance. No delays await him. Changes of horses are ready at every stage. Every thing seems to partake of the agitation which torments him. In a few hours he has left far behind Versailles, Chartres, Le Mans, La Flèche. He approaches Angers, when, all on a sudden, he experiences a violent and terrible shock. His carriage is upset, with a tremendous crash. Wounded and bleeding, he springs up ; severing the traces with his sword, he leaps on the back of one of the horses, and continues his rapid course with more

impetuosity than before. Angers, Varades, Ancenis are passed, his horse covered with foam, stained with the blood which still trickled from his own wounds.

At length the city of Nantes was dimly seen in the distance. Nantes, which contained his life, his soul, his whole existence. He encourages the wearied animal, which seems to understand his frantic exclamations, so well did it perform its arduous task. He enters the town—he is at the gates of the prison—his horse sinks under him!—what matter?—he is arrived! “Blanche, Blanche!” was the only word he could utter. “Two carts have this instant left the gates for the place of execution,” replied the porter, “she is in the first.” Marceau stood to hear no more. A terrible curse broke from his lips as, rushing wildly through the streets, he forced his way through the crowd, waving the paper over his head, and crying “Pardon, pardon!” He passed the hindermost cart. A well-known voice exhorted him to increase his speed. It was Tinguy who addressed him. In another minute he arrived in face of the scaffold. The executioner was holding aloft, by the long fair hair, the head of a beautiful girl! A fearful cry of rage and despair, in which all the strength of human passion seemed blended, rang through the ears of the astonished multitude. Marceau recognised the features of Blanche de Beaulieu!

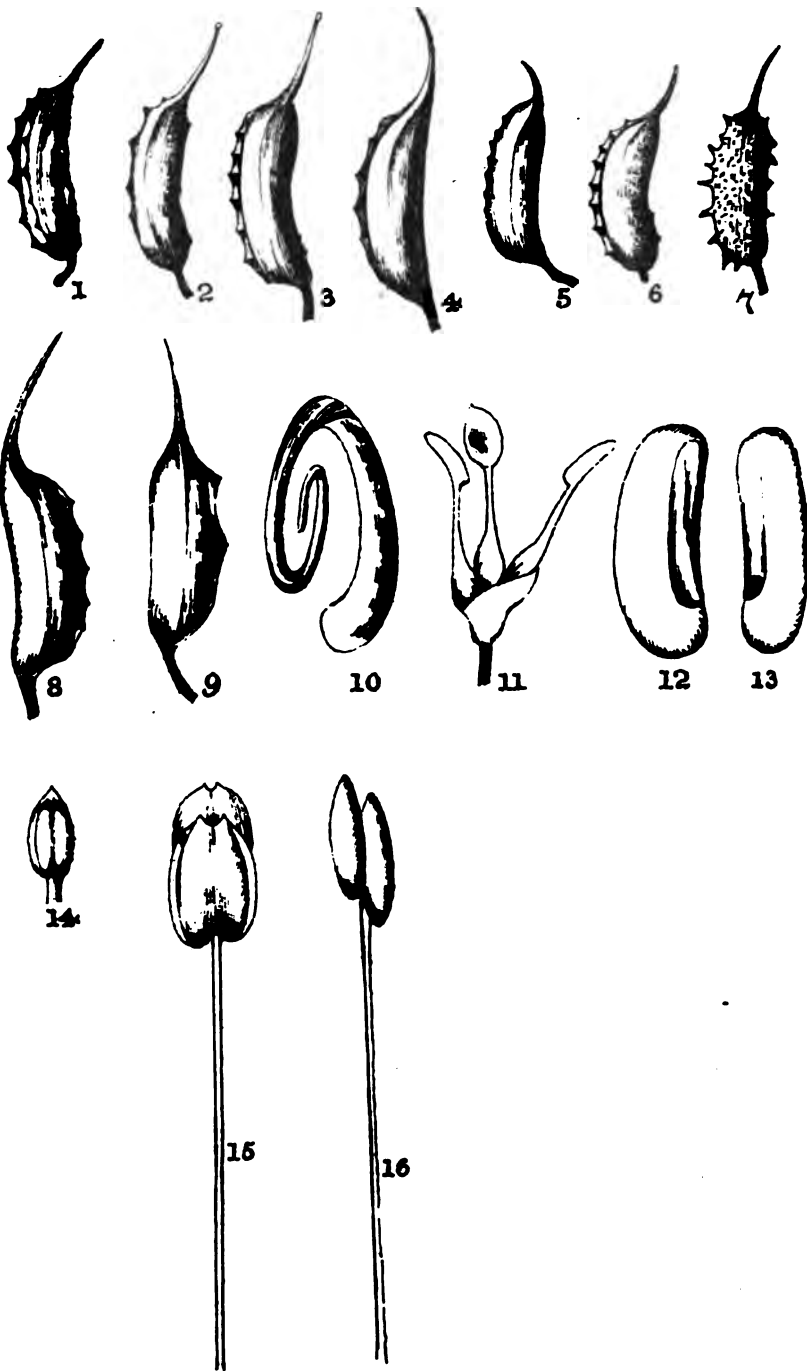
E.

OBSERVATIONS ON THE SPECIES OF ZANNICHELLIA.

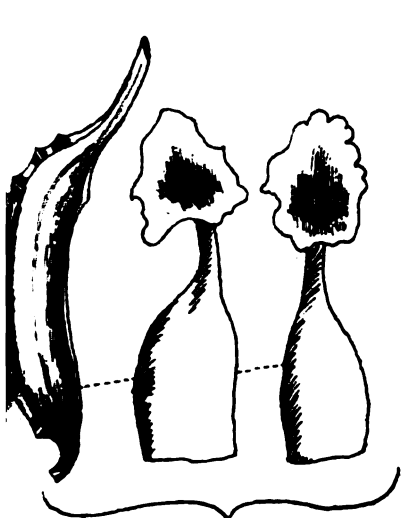
By AD. STEINHEIL.*

WHEN Micheli established his genus *Zannichellia*, he made known two species of it which were found in the environs of Florence, and gave of each an excellent figure for that time. Linnæus adopted the genus of Micheli, but united the two species which that author had distinguished, and admitted only one species, under the name of *Z.*

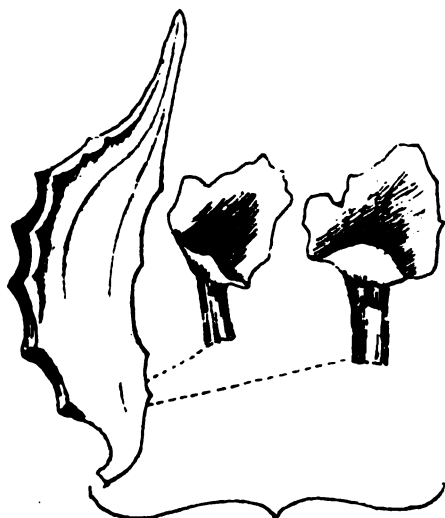
* Translated from the *Annales des Sciences Naturelles*, vol. 9, p. 87, by W. A. LEIGHTON, B.A. F.B.S.E. &c.



See M^r Leighton's Article — Page 262.



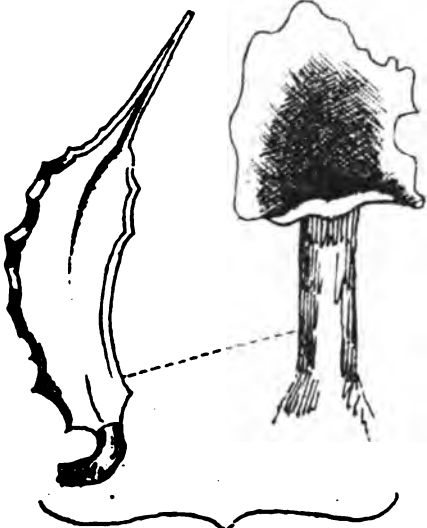
17



18



19



20

palustris. He neglected to mention, in the description of the genus, the number of the cells of the anthers, and spoke only of the general form of the stigma; so that his description was equally applicable to the two species of the Italian botanist, of which the one has two-celled anthers, with a crenulate stigma, the other, four-celled anthers and an entire stigma. At a later period, Willdenow distinguished them afresh; he reserved the name of *Z. palustris* for the species with entire stigmas, and gave to the other the name of *Z. dentata*, founded on the character of the stigma. These species were adopted by Poiret in the *Encyclopédie*. Since then, it appears that the character of the anthers has been completely forgotten; and because in the fig. 32 of Micheli the denticulation of the stigma is exaggerated, and it can only be seen with a powerful magnifier, and is especially difficult to be recognized in a dried state, the *Z. dentata* has disappeared from the catalogues, not, indeed, without some appearance of reason, since Willdenow quotes improperly, as a synonyme of his *Z. palustris*, the t. 67 of *Flora Danica*, which belongs to the other species.

We continued, therefore, to call every plant *Z. palustris*, Linn. in which we recognized the characters of the genus; and in this it can scarcely be said that we were wrong, since Linnæus had wilfully confounded the two species of Micheli. Sprengel still makes mention of *Z. dentata*, but only as a variety of the common species.

Since the *Z. tuberosa*, Loursiro, evidently forms part of another genus, the present has been reduced to a single species; and that has happened to it which has occurred also to a great number of the Linnean species which have been subjected to the more minute observations of modern botanists, many of them having been divided, and the primitive character of the species become frequently that of a whole group.

Bénninghausen (*Prodom. Fl. Mon.* p. 272) in 1824 recognized anew two species of *Zannichellia*, one of which he calls *Z. repens*, reserving to the other, which appears to have since become the *Z. major*, the name of *palustris*, after the figure of the *Flora Danica*. Nolte (see *Reich. Fl. Exc. Genn.* i, p. 6) took this *Z. repens* for the *Z. palustris*, and distinguished two other species under the names of *Z. maritima* and *polycarpa*. Chamisso (*Linnea*, 1827) transferred into this genus the *Potamogeton contortum* of Desfontaines. Salzmann brought from Tangiers a plant which he arranged under the name of *Z. disperma*, a name essentially bad, since derived from two carpels. M. de Brébisson, in his *Flora of Normandy*, has recently

described a *Z. digyna*, which had been communicated to him by M. Gay. We are also indebted to Reichenbach (*Plant. Crit.* vol. viii, and *Fl. Genn. Exc.* t. i, p. 7) for two other species, the *Z. gibberrosa* and *pedunculata*, besides a *Z. major*, Bænng. which is not indicated under that name in the *Flora of Munster*.

In the midst of this increase of fallacious riches, the primitive species have been most completely forgotten; the one of them has entirely disappeared, and the other has become a doubtful plant with those who have been skilful in distinguishing the new ones, for of *Z. palustris* Reichenbach says, "*species ex iconibus cognita, cætera dubia.*" The confusion is greater still among those who believe that they are acquainted with it. Indeed, the instant we distinguish two species, we must adopt the names of Willdenow, because both the descriptions of Micheli begin with the word *palustris*. Now the *Z. palustris*, W. is most generally that which has been described as a new species, whilst the name has been reserved for the *Z. dentata*; these errors having proceeded from the total neglect of the study of the floral organs, and from the characters having been sought for only in those of the vegetation, but more especially in the carpels. The negligence in this respect has been so great that in the recent *Genera* (the authors having probably had at their disposal only one of the species) the anthers are described as two-celled, so that, on studying some specimens from Barbary, I at first imagined that I had established a new genus; and it is to the kindness of M. Gay that I am indebted for an interesting observation which has guided me to the truth.

The organs of vegetation can furnish only very uncertain characters, every one being well aware how greatly aquatic plants vary in this respect, according as the water is running or stagnant, fresh or salt, deep or shallow, &c. The *Z. major* is distinguished by a more vigorous appearance and more highly developed stipules; but the character of the fruit, which ought to coincide with this appearance, seems by no means constant, at least, in some specimens, certainly as strong as the *Potamogeton pusillus*, which I have examined; and as to the character of the leaves being almost always in threes,* it by no means distinguishes this variety, for it is frequently found in the others.†

* "*Folia fœra semper terna*, Reich."

† We are indebted to M. Maire for the discovery of *Z. major* in the environs of Paris. He has also found it at Montmorency.

The fruit, which, according to the figures of M. Reichenbach (*Icon. Crit.*), appears to furnish such excellent characters, is by no means constant in nature, and nothing is more variable than the size of its dorsal membrane, which is also either very denticulate or nearly entire, the same specimen frequently presenting the greatest differences. Of the value of its modifications we may judge from our figures of the more remarkable forms. Fig. 1 belongs to a *Z. repens* from St. Cloud; fig. 5 to a *repens* from the environs of Carlsruhe, sent by M. A. Braun; fig. 6 to another *repens* from the environs of Paris. We perceive that, in the first instance, the dorsal margin presents three strongly denticulate membranes, and the anterior margin two much smaller membranes; in the second, the margin is simply crenulate; in the third, it has only a single denticulate membrane. The figs. 2, 3, and 4, belong to *Z. major*; the specimen from which the carpel No. 4 was taken, and which approaches most nearly the figure of Reichenbach, was found in the department of the Lower Rhine by M. Buchinger; 2 and 3 belong to the same form, but from the environs of Paris. Figs. 8 and 9 are the fruit of the same specimen of *Z. palustris*, W. brought from Algiers by M. Bové. If 9 had more teeth, it would correspond exactly with *Z. gibberosa*, Reich. which name we might be induced to apply always when the anterior margin is furnished also with a denticulate membrane; but I conceive that it must be reserved for plants which possess at the same time a very long style, because that author partly characterizes his species by the words *fructus macrostyli*, the length of the style being, in reality, the only character at all certain in the fruit; and, although this may vary slightly, it may be remarked that in the varieties with four-celled anthers it is always nearly equal to the carpel, whilst in those with two-celled anthers it only slightly exceeds the half of the carpel; it being clearly understood that our examination must be made when the fruit is mature, at which time it is the only character remaining to distinguish *Z. dentata* from *Z. palustris*, inasmuch as the stamens are then generally fallen and the stigmas withered.

Although the length of the style furnishes a sufficiently good character, it is not so with its direction; generally it is curved backwards, that is, its concavity is towards the back of the carpel, but in the same specimen it is sometimes found quite straight, or even curved forwards. Nevertheless, in all the species, it possesses one common character, that of being enlarged at the base, and bearing on one, at least, a projecting line, which is continued on the carpel sometimes along the middle, sometimes a little nearer to the back.

The dried stigma forms at the summits of the style a small hook, which frequently disappears; in the flower (see fig. 11) it is peltate, slightly concave, papillose, and crenulate, in some of the varieties, glabrous, entire, and somewhat narrower, in the others, which characters coincide with those derived from the length of the style and the number of the cells of the anther.

As to the length of the peduncles, we should not have thought it worthy of mention had not previous writers made use of it in forming species; for it furnishes only very unimportant characters, although it be sufficiently constant in the same specimens, appearing to depend on the state of the water, at least, the plant in which we have observed the longest peduncles, grew in a small brook of running water at Bone. The partial peduncle exists much oftener than the general one. It must be remarked that the employment of this character has led to confusion by forming a bad species out of a variety allied to the two primitive species; the *Z. pedunculata*, *Reich.* presenting, according to that author, two varieties, one *a*, *stagnalis*, the other *b*, which is the *Z. maritima*, *Nolt.* I quote the latter after Reichenbach, but as I have observed that *Z. palustris*, *W.* is almost always found near the coasts, whilst *dentata* grows in inland situations, I believe the quotation to be correct; and as the herbarium of the museum contains specimens of the two varieties, communicated by the author himself, I have satisfied myself that the variety *stagnalis* corresponds with *dentata*, and the variety *maritima* with *palustris*.

The number of the carpels is also very variable in the same specimens, appearing to be most constant when the number is small. They are frequently four in number, and groups of five are likewise found on the same stem.

I must caution the student against an appearance which the carpel presents when, by maceration, it has lost its epidermis; the dried cellular tissue is then exposed, and exhibits a tomentose aspect; the style appears larger and slenderer; and the back of the carpel, instead of being bordered with a denticulate membrane, is furnished with a range of minute isolated points, as represented in fig. 7.

The anther (see fig. 14) is oblong, two-celled, and surmounted by a minute point, or four-celled and biapiculate. This character appears very constant, though M. Gay has remarked that his *Z. digyna*, which has four-celled anthers, has them also, sometimes, two-celled.*

* This diminution in the number of the cells of the anther must not,

The length of the filament offers great variations. Having studied these species in a dried state only, in which the stamens are rarely found, I am unable to appreciate with exactness the value of these differences. In the variety which I have observed at Bone, the filament was nearly three inches in length; in the form named *repens*, I have found it nearly equal to the carpel; in the *major* it is three times longer; but M. Gay has remarked that the anther is at first sessile, and that the filament becomes gradually elongated, consequently I am induced to regard these differences of as little importance as those of the peduncles.

The embryo (see figs. 10, 12, 13) is similar in all the carpels, and such as authors have described it, viz. the cotyledon is folded back against the caulicule (*tigelle*) after having been twice folded on itself; the two latter folds, however, instead of being placed between the caulicule and the first portion of the cotyledon, in the same plane, are thrust out on the one side, so that, on examining the embryo on the other side, only a single fold is visible (see fig. 13), whilst the whole three are seen on this (see fig. 12). From the figure given by Reichenbach of *Z. polycarpa*, *Nolle*, we are led to imagine that the embryo of this species differs from that of the others, inasmuch as the cotyledon appears founded only on the caulicule (*tigelle*); however, as this is not sufficiently explained in the text, and as the figure agrees exactly with one of the sides of the embryo of other species, I am unable to fix my opinion with regard to this point.

From all that has been said, it appears quite clear that we must not recognize as species sufficiently characterized all the forms which have been lately described, nor must we imitate M. Koch, who regards them all as mere varieties of *Z. palustris*, *Linn.* (see *Syn. Flor. German. and Helv.* t. ii, p. 679); but we must return to the species of Micheli and of Willdenow, the others appearing to be nothing more than sub-species or mere varieties. I shall endeavour to refer them to their types, for which purpose I shall be obliged to adopt the names of Willdenow, which, however, are not those which

however, cause us to regard the character of the stamen as valueless; for, first, it appears to be very rare, since Smith says he had never seen *Zannichellia* in England otherwise than with four-celled anthers; and secondly, the contrary never occurs, at least it is probable, since all authors inhabiting the interior, and having at their disposal only *Z. dentata*, agree in describing the anther as two-celled. Treviranus had searched in vain (although he had directed his attention to this very question) for anthers with four cells.—See *Symb. Phyt. fasc. i.* Gott. 1831.

I should have preferred, inasmuch as his *Z. palustris*, growing in preference near the coasts, its name might lead us into error, since it would seem to belong with greater propriety to the other species. The name of this latter rests on a character very difficult to be seen; but I do not conceive that these inconveniences are of sufficient importance to warrant the introduction of new names.

In the following synopsis I shall cite few authors, because it is rarely possible to ascertain what species they are speaking of, though in general the locality is a tolerably good guide, but must not be depended on entirely; since the *Z. palustris*, according to Micheli, grows in the environs of Florence, and M. de Bœnninghausen says of *repens*, "*in fossis turfosis præcipuè salis.*"

● ZANNICHELLIA.—MICHELI AND LINNÆUS.

Z. palustris, Linn. species amplectitur duas.

I.—*Z. DENTATA*, Willd.

Z. antheris bilocularibus uni-apiculatis, stigmatibus crenulatis papillois; stylis in fructu maturato ovariis dimidio brevioribus.—Micheli, *Genera*, t. xxxiv, fig. 1; *Z. dentata*, Poir. *Encycl.*

Sub-species 1^a.—*Z. dentata repens*: stipulis intrafoliaceis fugacibus tenerrimis; planta gracilior sæpissimè repens.—*Z. palustris* *repens*, Koch. *Syn.* t. ii, p. 679.

α. Carpellis sessilibus dorso crenatis.—*Z. repens*, Bænnh. *Fl. Monast.* p. 272; *Reich. Ic. Crit.* 756; *Z. palustris*, Gärtn. *de fruct.* t. i, p. 19, fig. 6; *Ledeb. Flor. Alt. and Plant. miss. herb. Mus. Paris!*

β. Carpellis sessilibus dorso marginatis dentatis.—*Rich. Ann. Mus.* t. xvii, pl. v, figs. 38 and 39.

γ. Carpellis subsessilibus dorso cristis dentatis, tribus exasperatis et anticè membranaceo-dentatis.—*Nob. fig. 1.*

δ. Carpellis pedunculatis dorso marginatis dentatis.—*Z. pedunculata*, *stagnalis*, *Reich. Fl. Excurs. Germ.* t. i, p. 7.

Sub-species 2^a.—*Z. major*: stipulis intrafoliaceis latioribus nec

tam fugacibus; carpellis subpedunculatis.—*Z. palustris*, *Flor. Dan.* 67; *Z. palustris*, *major*, *Koch. Syn.* t. ii, p. 679.

Planta fluitans, magnitudine Potamogetonis pusilli.

- α. Dorsi crista subcontinua.—*Z. major*, *Reich. Icon. Crit.* 758; *Z. palustris*, *Bænnh. Flor. Monast.* p. 272.
- β. Dorsi crista dentata.

Its size, and the appearance of its larger stipules on those branches which are not too old, are the characters which distinguish this subspecies; it is very easily recognized, and appears to be found in the deeper water. According to M. G. Drees, *Z. repens* is only a variety of *Z. palustris*, *Linn.* growing in calcareous water (see *Linnaea*, 1827, p. 237. The *repens* from the environs of Paris which we have seen, came from St. Cloud; and all the specimens from St. Gratien and from Montmorency which we have seen, belong to our *major*.

II.—*Z. PALUSTRIS*, *Willd.*

Z. antheris quadrilocularibus biapiculatis, stigmatibus paulum angustioribus integerrimis non papillosis, stylis in fructu maturato ovaria subaequantibus.—*Micheli Nov. Gen.* t. xxxiv, f. 2; *Z. palustris*, *Poiret, Encycl.*; *Smith, Flor. Brit.* t. iii. p. 955; *Z. palustris*, *repens*, *Koch. Syn.* t. ii, p. 679.

- α. Carpellis geminis longi pedunculatis; filamentis 2-3-pollicaribus. Fructus desideratur? circa Bonam Numidiae vere 1833 legebam, sed exemplaribus amissis, ex icone et schedula haud sufficientibus plantam adhuc dubiam hic refero.—*Nob. fig.* 16, 21.
- β. Carpellis geminis subsessilibus.—*Z. digyna*, *Gay in Brébisson Flore Norm.*; *Z. disperma*, *Salzm. Pl. exs. in herb. Gay.*
- γ. Carpellis 3-5 plus minusve pedunculatis nonnuquam sessilibus.—*Z. digyna*, *var. tetragyna*, *Gay in herb.*; *Z. maritima*, *Nolte, Nov. Fl. Holsat.*; *Z. pedunculata*, *β maritima*, *Reich. Fl. Germ. Exc.* t. i, p. 7, in *Icon. Nost.* f. 8, 11.
- δ. Carpellis 3-5 pedunculatis in utraque margine membranaceo-dentatis.—*Z. gibberosa*, *Reich. Icon. Crit.* t. 759, and *Flor. Germ. Exc.* t. i, p. 7.

SPECIES NOT SUFFICIENTLY WELL KNOWN.

III.—*Z. POLYCARPA*, *Nolte, l. c.*—*Reich. Icon. Crit. t. 757, fig. 1004.* Stylis in fructu maturato ovariis ferè sextuplo brevioribus; etiam cl. Koch. ignota, species adhuc rarissima videtur.

The plant represented by Miller (*Ill. Syst. Linn. t. 77*) is regarded by Smith as *Z. palustris, W.*; according to Miller, it is found in Europe and in Virginia. From his figure, it has four-celled conical anthers; ovaries in number four, surrounded by a regular urceolus (*urcéole*), with three short teeth; and, lastly, the fruit, by the shortness of the style, reminds us strongly of *Z. polycarpa, N.*: but on this point can we trust to the figure of Miller? We know, in other respects, so little of *Z. polycarpa*, that, if we should even have before us a plant resembling the figure of Miller, we should hesitate to affirm that it was really the species of Nolte. It is evident that Smith had never seen any thing like it, since he says he had seen only one species in England; and if he had found more he would have distinguished them, instead of confounding in the same quotation different figures. Plukenet (*Phytog. Lond. t. 102, fig. 7*) has represented a *Zannichellia* which may be equally taken for *polycarpa*; but it is impossible, even in less delicate characters, to decide after a figure published in 1691.

IV.—*Z. PERUVIANA*.—Ab unâ ex Europæanis fortasse non diversa. In aquis vivis lurini (*Herb. Mus. Paris*).

This plant exhibits nothing very positive in its fruit: the absence of the stamens prevents us from determining it with certainty. Perhaps it is a distinct species; perhaps only a mere variety of *Z. repens*.

V.—*Z. CONTORTA*.—*Cham and Schlecht, Linn. 1827, p. 231. Potamogeton contortum, Desf. Atl. i, p. 150.* In herbario floræ atlanticæ musæi Parisiensis specimen fructibus parvis et immaturis nobis incertam facit speciem.

We have little to say of the botanical geography of *Zannichellia*; these plants appear scattered throughout the whole extent of the temperate regions of the two continents, extending very far towards the

north, where one species, *Z. polycarpa*, apparently quite distinct, appears.

M. Fries appears to have found this species, as well as our two, in Sweden (*Nov. Flor. Suec. mant. prim.*) ; for he mentions the *major*, Bœnng. under the name of *palustris*, and the *repens*, although with doubt. His *pedicellata* evidently appears to be the *palustris*, Willd. ; and, on the other hand, if the *Z. contorta* is a good species, the south will also possess its species. The *dentata*, W. has not yet been found in Barbary, but this may be accounted for by reason of little more than the coasts having been yet explored ; and, as we have remarked, the varieties of *dentata* are generally found in inland situations, and those of *palustris* near the sea. Besides, these plants are of a nature easily to escape the researches of travellers, and consequently we are prevented from tracing with exactness the limits of their vegetation.

The difference in number of the cells of the anthers seems to us a remarkable fact, more especially as the number of these cells appears susceptible of variation in the same species, according to the observation of M. Gay. When there are four cells the anther is biapiculate, which renders it probable that, in this case, there are two stamens agglutinated. It is true that, according to Micheli, the anthers are sometimes found with three cells ; but it appears to us that this difficulty may be easily overcome by supposing that in one of the anthers there is one cell abortive. A new genus from Madagascar (*Diplanthera*, Du Petit Thouars), published by Du Petit Thouars, entirely confirms our opinion, its stamens being formed of two bilocular anthers, situated on the same filament, but at unequal heights (see figs. 15 and 16).

If we reflect on this variation in number of the anthers and carpels in *Zannichellia*, and on the presence of the number four in *Ruppia* and *Potamogeton*, a number altogether abnormal in monocotyledons, we shall be induced to consider it as probable that the flowers of the Potameæ are spadices (*spadices*), and that each carpel or each stamen constitutes a flower ; which will approximate this family to the Aroidæ, and remove it from the Juncagineæ, with which it has such affinity.

NOTE BY THE TRANSLATOR.

In *English Flora*, vol. 4, p. 70, Sir J. E. Smith remarks, "*Z. dentata* of Willdenow, separated by him, at my suggestion, from our British plant (*Z. palustris*), was long ago well distinguished by Micheli, t. 34, fig. 2; and if he be correct as to the two cells of its anther and the toothed stigma, nothing can be more distinct. It may probably be found in England." From Hooker's *Comp. to Curtis's Bot. Mag.* vol. 1, p. 191, we learn that in 1835 a *Zannichellia* was found by Mr. J. E. Bowman at Gresford, near Wrexham, Denbighshire, and also by Mr. Johns in Cornwall, which corresponded with *dentata* in having the stigma large, membranous, and toothed, peduncle and pedicles of the capsules very short and nearly wanting, the anthers two-celled, and the embryo with 6-7 folds; whilst in *Z. palustris* the stigma was large and entire, the capsules pedicellate and seated on a distinct common stalk, the anthers four-celled, and the embryo with four folds. In the same year Mr. C. C. Babington collected in Needwood Forest, Staffordshire, specimens of *Zannichellia* with two, three, and four-celled anthers on the same plant. Sir W. J. Hooker, in commenting on the above discoveries, says that the latter considerably lessens the value of the character derived from the anthers; and that the toothing of the stigma being undoubtedly variable, and not confined to the sessile-fruited *Zannichellia*; that the folds in the embryo being also variable in both; and that the only constant character being the sessile or stalked fruit, which, however, forms no part of Micheli's character of his original *dentata*, in which the capsules are equally pedicellate as in his *palustris*; he must conclude the *Z. dentata* of Micheli, Willdenow, and Smith, to be merely a variety of *Z. palustris*.

Possessing, through the kindness of my friends Bowman and Babington, authentic specimens of their plants, a careful examination of them has shown that the Gresford plant (see fig. 17) has the anthers two-celled, the stigma (a) peltate, slightly concave, papillose, irregularly crenulate or toothed; the fruit (b) nearly sessile, the carpels on very short pedicles, their dorsal margin with a denticulate membrane, and the anterior one with one or two distant teeth; and the style about half the length of the carpel, and variable in its curvature or direction. In Babington's plant (see fig. 18) the stigma (a) is also peltate, concave, papillose, and irregularly crenulate or toothed; the fruit (b) nearly sessile; the carpels on very short pedicles, the dorsal margin bearing one distinct denticulate membrane, and having on each side of it, in the upper portion of the carpel, another interrupted den-

ticulate raised line; the anterior margin more decidedly denticulate than in the Gresford plant; and the style half the length of the carpel, and variable in direction. In specimens gathered by myself in 1832, near Cambridge (see fig. 19), the stigma is peltate, concave, papillose, and irregularly toothed; the anthers four-celled; the fruit and carpels, which are not mature, equally sessile as in the foregoing; the margins denticulate, and the style similar in relative length. I also possess specimens from Dover (see fig. 20), in which the stigma (a) is peltate, concave, papillose, and irregularly toothed; the fruit (b) nearly sessile; the carpels on rather longer, but still very short, pedicles; the dorsal margin with three denticulate borders, the central one most prominent, and the others somewhat interrupted; the anterior margin distinctly denticulate; and the style half the length of the carpel, and variable in direction. The anthers in the latter specimen I was unable to detect. In all these specimens the style is enlarged at the base, and bears a projecting line, which is continued along the middle of the face of the carpel.

The above results appear to militate strangely against the observation of M. Steinheil, that the entire stigma is accompanied by four-celled anthers, and the toothed one with two-celled anthers; since in all our specimens, whatever are the number of the cells, the stigma is toothed. They all, likewise, coincide in the relative length of the style to the carpel, in the carpels being almost sessile, and their margins nearly similar in denticulation. Now, as it is admitted by Steinheil that the anther-cells are variable, in one instance at least, in the form with four cells, by the suppression of two of them, why may not the contrary be admitted, that the two-celled anthers are also liable to vary by an increase of one or more additional cells? And from the above this seems plausible; and as all our specimens agree in two other characters of Steinheil's *dentata*, viz. the toothed stigma and the style half the length of the carpel, we necessarily feel disposed to consider them all as forms of his *Z. dentata*, notwithstanding the variation in the number of the anther-cells. Without arrogantly presuming to decide confidently on a point in which the most skilful botanists are at issue, it may be suggested that those who possess the facility of examining living specimens, by which alone can the question be decided, would hasten to ascertain whether the only characters which confessedly appear at all constant, are in reality sufficiently so to constitute two good and distinct species, viz. the toothed stigma, and the style half the length of the carpel, in *dentata*, and the entire stigma, and the style nearly equal to the carpel, in *palustris*.

OBSERVATIONS ON THE ANIMALS INHABITING MULTILOCULAR SHELLS,

CHIEFLY WITH A VIEW TO THE GEOLOGICAL IMPORTANCE OF THE SUBJECT.

BY D. T. ANSTED, ESQ. B.A. F.G.S. F.C.P.S.

OF JESUS COLLEGE, CAMBRIDGE.*

IN a former paper on this subject, which ended rather abruptly, in consequence of a page of MS. having been mislaid, I was proceeding, after certain general remarks, and some account of the family Nautilacea and two genera of Ammonoata, to describe the sub-genera of the important and widely-extended Ammonites; and it may be remembered that the first of these, the *Goniatites*, was the only one of which any extended account was given. Next in order, the *Ceratites* of de Haan were mentioned as occurring in the muschelkalk beds of the continent; and these differ chiefly from the *Goniatites* in the nature of the intersection of the chamber with the shell, which in the latter group is angular, whilst in the former it consists of a series of nearly regular curves, alternately semicircles and mere wavy lines. But there is a further difference, causing a nearer approximation to the true Ammonites, in this group; for, instead of the shells being very round and smooth, as the *Goniatites* almost invariably are, they begin to be provided with tubercles, acting as a sort of compensation for a flattening of the spiral, which generally occurs when these are introduced: for this flattened form, not being so strong with the same thickness of shell as the more rounded shape and more perfect arch of the other group, the tubercles or bosses are introduced, "superadding the strength of a dome to that of the simple arch at each point where these bosses are inserted."

Passing on now to the other Ammonites, we find the line of intersection already spoken of waved in a more and more complicated manner, till it resembles rather the edge of a parsley leaf, or the sutures of a skull, than any thing else one can compare it to, and at the same time the number of bosses or tubercles is increased, and additional contrivances for strength are introduced, the shell often becoming extremely fragile and the siphuncle very minute. In the chalk Ammonites especially the shell is very thin; and it is often a

* Continued from page 50 of the last number.

matter of some difficulty, even in large specimens, to discover whereabouts the aperture for the siphuncle is situated.

Now, with regard to the use of this extreme complication of the edge of the chamber, although it certainly seems to add much strength to the whole, there is a secondary object mentioned by M. von Buch, which we must not neglect to notice. He considers that the alternate projections and recesses thus formed must have given firmer hold to the mantle of the animal, and enabled it to retain, in safe and close connexion, the animal and its shell, notwithstanding the small size and inconvenient position of the siphuncle, which, in all probability, is of much use for this purpose in the Nautilacea. Following out the idea, he has traced a remarkable uniformity in the number and positions of the undulations throughout the whole genus of Ammonites. "I think," he says, "it may be considered a question definitively settled that in all species, whatever may be the apparent anomalies of form, it is easy to make out six principal lobes,* with other accessory lobes interposed, which all adjust themselves with wonderful regularity in the circumference of the shell." Between every pair of depressions or lobes there is a raised rounded part, the saddle; and these saddles always correspond in number and position to the lobes.

The system of lobes and saddles, so constant and disposed with such exact symmetry, appeared to M. von Buch to indicate an organization separating very decisively the two families Nautilacea and Ammonacea; and although, perhaps, the conclusions drawn from this view of the subject, and the sub-divisions proposed, are premature, and the facts already determined not quite so important as they have been assumed to be, still much good has been done by the mere convenient classification of so large a genus into distinct groups, which, indeed, our author goes so far as to call "une distribution claire, positive et utile, en familles naturelles."

We have one more remark to make on the Ammonites generally, before proceeding to the consideration of the allied genera. Their shells, it would seem, are usually thin, and the siphuncle small; but the former receive great additional strength by the number of ribs, as well as tubercles, not immediately connected with the septa, and fluting, as it were, the part most exposed to pressure; while the

* By the word "lobe" is designated the depressions which occur in the wall of the chamber of Ammonites, &c. caused by the successive bends of the undulations towards the aperture. The raised parts between these hollows are called saddles.

latter—the siphuncle—is often undefended, being almost always placed at the extreme dorsal edge of the shell, and sometimes actually outside it.

Lastly, with regard to the distribution of the remaining groups of this genus, it is important to observe that the period throughout the formation of the oolites was by far the most abundant, in every way, in species, as well as individuals. Even in the limited state of our knowledge of the animal kingdom at that time, we can speak to not less than a hundred and fifty distinct species, every one created, living its appointed time, and becoming extinct, between the commencement and close of that series of limestone deposits.

In all parts of the continent of Europe, as well as in Great Britain, the fossils of this genus are extraordinarily abundant; but they are not confined to Europe. Specimens have been found very high up on the Himalaya mountains, in Asia. They occur in the state of New Jersey, and in several other places in North America; in Brazil, and on the coast of Chili in South America: and probably, when future researches shall have laid open the scientific stores of Africa and Australia, other species will there be found, showing the genus to have been once as widely distributed as it was undoubtedly locally abundant.

It is rather singular that out of a number of allied genera, forming together an important natural family, one genus should be among the most widely spread of any that is known, and all the others comparatively very rare, and occupying no important place in the scale of nature. Yet so it is in the case before us; for the Ammonites are not more remarkable for their singular variety and great numbers, than the several genera, closely allied in every thing but external form, are for the very narrow limits within which they are confined. The Hamites, next in order to the Ammonites, are not, indeed, quite so rare as the Scaphites or Turritiles already described; but still they are only met with in a few strata, and in but one of those are they at all abundant. Of the different species known, two occur in the continental beds of the oolites; one so low down as the lias, while there are nearly thirty in the cretaceous group, most of them occurring in the two beds of green sand.

Of the Baculites, which come next, five species only are named at present, and all appear to have lived during the deposition of the chalk. The difference between these two last genera consists, to all appearance, in a very unimportant change of form, the Hamite being, as we have already observed, bent round more or less at the smaller extremity or apex of the long, narrow, and often elliptical

cone, which is the simple and ordinary form of the Baculite. Both are sometimes ribbed, though the latter rarely; and in both the edges of the septa are very complicated. The shells of both, too, are commonly rather thin, the siphuncle not large, and the complete fossil, especially of the Baculite, extremely rare.

So much for the external form of the shells referred to the great natural family Ammonoata; a family which deserves well the consideration of the palaeontologist, since of all others it is, as we have already remarked, the most widely spread, the most characteristic of several formations, and which is, moreover, just so nearly allied to living types as to excite our curiosity, and raise our hopes that something may sooner or later appear, some new discovery or closer observation made, by which our speculations may be tested, and their truth or falsity proved.

With a full knowledge, then, of the danger of too rash generalizations, and wishing it to be clearly understood that our theories and attempted analogies are rather thrown out with a view to excite inquiry than with any expectation of satisfying doubts, or still more of deciding dogmatically on any disputed point, we will proceed to the consideration of the following queries, viz. how far the analogies traceable in the shells of the Nautilacea and Ammonoata are indicative of analogous habits, and to what change of habits of the animal the alteration of structure in the two families may most probably refer.

Now, that the subject may be more perfectly understood, let us here just repeat, in as few words as possible, the most important both of the analogies and differences, because, when they are thus put in apposition, our plan of considering the matter will be more clear to the reader, and its value, however small, more truly appreciated.

The shells, then, of the two families, are, in all cases, multilocular, the chambers being filled with air during the life of the animal, and forming then a mass not very different in weight from the weight of an equal mass of water. In other words, the shell would float of itself under the ordinary conditions. Besides this, the walls of separation of the chambers are always pierced with a hole larger or smaller, through which a tube has passed, communicating with the interior of the animal. There is, in all the species, considerable regard paid to the general strength of the shell in some way or other, more especially where the animal is no longer present, for the empty cells are stronger than the outer one, which is, in most the only one inhabited.

Such are the analogies: the differences are sufficiently remarkable, and refer chiefly to the walls of separation or septa between the chambers, the siphuncle or tube running through the chambers, and the peculiar methods adopted to strengthen the resisting power of the empty cells.

The first difference is that relating to the septa. In the Nautilacea these are simple plates, concave outwardly, and presenting a nearly regular curve in their intersection with the shell. On the other hand, they are in the Ammoneata, always more or less circular in their form, and the line of intersection varies from a kind of zigzag, to as complicated a curve as can be imagined to exist. There is, thus, in the species of this family, a contrivance by which each internal transverse plate, presents a much longer line for the shell to press against, or, if you will, offers a much greater number of points of resistance than in the more simple-formed Nautilacea.

The next point of difference to be attended to, is in the siphuncle, and it is one both of position and magnitude. In the genera of the first family, this important part is sometimes ventral, or on the inner margin, more frequently central, and is very rarely observed to approach the dorsal or outer margin. On the other hand, it is almost always very near the dorsal margin in the Ammoneata, and sometimes is actually placed outside, in a channel opened for it, and projecting from the back of the shell in the shape of a keel. The difference in size is not so constant; but it is not, certainly, too much to assert, as a general rule, that it bears a very much smaller proportion to the area of a section across the chamber in Ammonites and their congeners, than in the Nautiloid forms. The siphuncle, then, is, on the whole, more undefended, and apparently less important, in the former than in the latter.

Lastly, there is the difference of plan resorted to in the two families to accomplish the same purpose, that of giving a degree of strength not found in other shells. In Nautilus, and generally in the Nautilacea, the most simple means are employed. The shell is tolerably thick, the whorls often successively envelope each other, and the surface exposed forms a tolerably strong single arch. Not so is the case with most of the Ammoneata. The shell is usually extremely thin, even in the very large species; the whorls do not, or at least very rarely, envelope; and the spiral disc, being flattened, as it often is in the transverse section, is frequently elliptical, and sometimes almost angular. But now for the compensation. Instead of a simple arch, we have one which is fluted; and we find a set of contrivances, consisting of ribs and domes, with transverse

plates supporting them along a wavy line sometimes eight or ten times as long as the perimeter of a section, and all this without giving to the shell an increase of weight at all inconsistent with the supposed habits of the animal. It should not, however, escape notice, that the additional strength would only avail against regular pressure, while the diminished thickness would render the shell more susceptible of injury from accidental causes, than the more simple covering of the Nautilus.

These being the points of difference, let us now consider their comparative importance, and then proceed with a few speculations, with which this part of our subject will be concluded.

Referring, then, to a former part of this article, where it was endeavoured to give an outline of the comparative anatomy of the Nautilus, it will appear that, since in that animal the siphuncle passes between important viscera and enters the pericardium, we are at liberty to conclude that it serves very necessary purposes in the animal economy; for otherwise, according to all principles of analogy, there would not be so much care taken for its preservation, nor would it be connected with such vital organs. Also the position, as well as the magnitude, of that curious tube, is a question of some importance; for it could not pass through the same viscera, or indeed into the pericardium at all, when ventrally or dorsally situated, without making rather a sharp turn upwards or downwards. Again, since the mantle in the Nautilus covers that part of the body of the animal within the shell, and is attached by two lateral muscles only, it is fair to suppose that the connexion with the siphuncle was not entirely useless in assisting to make a central fastening, without which the two lateral ones could hardly be sufficient. Now, in all the forms of which the Ammonite is the type, there was a more or less irregular shape, to which the mantle could more easily fasten itself than to the smooth cup which forms the outer chamber of the Nautilus; and the alternate indentations and projections in the septum, together with those in the ribs and tubercles of the shell, must have kept the shell well attached without much assistance from the siphuncle.

Taking into consideration, then, the uses of this tube, both as a means of altering the specific gravity of the whole mass, and also as a string by which the animal inhabitant was steadied in its abode—remembering that in the Nautilus and its congeners it is, almost without exception, tolerably capacious, and could have entered the body without much difficulty and at small disadvantage, while in the Ammoncata the size is diminished, and the mechanical disad-

vantage of entering at a sharp angle is considerable—remembering also the flattened shape in the latter family, and the amount in which it differed from *Nautilus* in its other proportions, and at the same time not losing sight of the numerous analogous points—it will probably be admitted that the anatomical and physiological structure of the types of the two principal families of Cephalopods must have been, on the whole, a good deal alike, differing, however, probably, in some not unimportant points; and then comes the question of more general interest, and more fit, indeed, for discussion—How did this change show itself in the habits of the animal?

It must not be supposed that I have been making these extended remarks with a view of preparing the reader for some grand theory to which I am about to advert; my object has rather been to give an account of the methods of reasoning by which naturalists have come to the conclusion that Ammonites, Hamites, &c., belonged to animals, in all probability, nearly allied to, and yet distinct from, those inhabiting the *Nautilus* and other shells, bearing considerable resemblance in outward form. It is well that these foundations of opinions should be generally understood; for it is by no means the case that a mere superficial resemblance is at all sufficient to prove that a real affinity exists.

Now with regard to the change of habits. The animal of the *Nautilus*, we know, floats occasionally at the surface of the water; but from the remains of food which have been found in the stomach, and also from its occurring generally near sandy shores, there seems a great probability that it feeds on the small crustacea inhabiting the bottom, at no great depth of water. It will be clear that the larger the size of the siphuncle the more rapidly could the specific gravity of the mass be changed, and an upward or downward motion communicated, and thus that the *Nautilus* is peculiarly fitted for shallow sandy and muddy bottoms, and the neighbourhood of small islands. It seems, however, equally evident that the animal would never be very likely to burrow in the mud or be enveloped in it, endowed as it was with powers of locomotion to a considerable extent.

Now, during the deposition of those extensive beds which compose the oolitic formation, and which we have already mentioned as peculiarly rich in Ammonites, the bottom of the sea must have consisted chiefly of calcareous mud; and there is good reason to suppose that while the deposition was going on the depth of water could not have been very great in the places where the Ammonites are found, for along with them there occur numerous organic re-

mains extremely perfect, which we know, as far as analogy can make us certain, could not have lived at extreme depths. The same may be said of the chalk formation, with regard to the deposition of mud that it must have formed; and it seems pretty certain that animal life, for the most part, ceases to exist at any thing like deep water, just as on high mountains there are very few species which live and perform their functions.

It seems, then, not unreasonable to suppose that, since Ammonites and the allied genera are better adapted to resist regular pressure, but are more exposed to accidental injury than the Nautilacea—since, too, their siphuncle is generally smaller, and not so advantageously placed as in that family, but sometimes a mere thread, totally incapable of being employed as a means by which the animal could alter its depth in the sea—since, too, the Ammonites seem to have been abundant during the deposition of strata of calcareous mud—putting all these matters together, may we not venture to suggest that the animals of this family were, for the most part, the constant inhabitants of the bottom of the ocean in moderate depths, living there in the thick mud upon the numerous shell-fish and shell animals of all kinds, which we know to be very plentiful in such places?

The difference of habits, then, that we conceive to have existed, amounts to this: that while the Nautilus and its congeners were capable, probably, of coming to the surface, and even of feeding there occasionally, though upon the approach of danger they would immediately sink by means of their large siphuncle, the Ammonites generally were more confined to the bottom, burrowing, perhaps, more or less, in the soft mud, and seldom wandering from their ordinary habitats while they could subsist quietly on the nourishment they found there.

Of course, this general conclusion is not expected to include every particular case: there are Ammonites with large siphuncles, and Nautilacea with small ones. The genus *Endosiphonites* approximates to Ammonites in external form and the existence of ribs on the shell, although it has a large siphuncle; while, on the other hand, many *Goniatites* resemble Nautilus so closely in every thing but the siphuncle, that, were it not for the almost total absence of that organ, we should find an example of analogy to an unusual extent. Still the exceptional cases are not more numerous than in other branches of natural history, where a great majority of known facts is always considered sufficient foundation for theorizing.

If it is admitted, then, that the structure in the great family

Ammonacea indicates habits, on the whole, more stationary than those of the *Nautilacea*, let us return now to the different genera, as they have been already described, and see what particular results we may obtain from studying their change of form with a similar view. And first the *Turrilite*, which is so very fragile and easily injured a shell that I do not know of the existence of one perfect specimen of any size, and that even a tolerable specimen is extremely rare. This shell, however, grew sometimes to an enormous size; and if we can even suppose that its slender siphuncle could have contained fluid enough to alter the specific gravity of the animal and shell so much as to produce motion upwards or downwards, still, when we know that the slightest touch would cause a fracture, it seems improbable that such unnecessary danger should be incurred; and we conclude, surely not without reason, that this genus, at all events, was a constant inhabitant of the bottom, and that the soft mud enveloping the shell would be at once a defence and a place of concealment. The tubercles and other mechanical means by which the shell is strengthened against external pressure would, it is manifest, be very useful in resisting the weight of the superincumbent and surrounding mud.

With regard to the next genus—the *Scaphite*—it is exceedingly difficult to give any rational hypothesis, not only as to how, but even where, the animal could have lived. In most specimens that I have seen, the shell somewhat resembles a small *Ammonite* with the last whorl or two unwound, a small part extended nearly straight, and the rest bent round to meet the direction of the former whorls. Supposing this to be the complete shell, we can conceive the inhabitant living in the part unwound; and the fact of its bending again in a contrary direction, though curious and anomalous, is not unaccountable. But there is a far more extraordinary form sometimes met with; and here we seem almost completely baffled. It may be thus described: after the bend already spoken of has taken place, and the mouth of the shell has been brought round so as to be close to the principal spiral, the exudation of shelly matter seems to have gone on, and gradually approximated the aperture to the part opposed to it, at the same time diminishing the area of the aperture, and almost closing up the last chamber. Whether this is an accidental occurrence, arising from a diseased state of the animal, or whether there was some provision of nature to allow food to be taken and the animal functions to continue, are questions hardly to be answered in the present state of our knowledge. I must acknowledge myself quite at fault on the subject. On the

whole, however, since the shell of the Scaphite is compact and strong, and the siphuncle often of moderate size, it may have belonged to an animal with some power of locomotion ; and this seems the more probable from its occurring in a fossil state most commonly in the green sand formation, and not when the bottom of the sea could have had much mud for animals to burrow in.

The Ammonites, of which we have already said so much, need not now detain us long. The Goniatites have the siphuncle nearly always so extremely small that one cannot, with any degree of probability, suppose it to have served any very useful purpose. Of the other groups, some have also a mere thread, instead of an extensible tube ; while in others the organ is larger, and doubtless was of more importance to the animal : but the number of these latter is not, I think, great in proportion to the whole, and, for the most part, it seems probable that Ammonites were not endued with great power of locomotion.

The Hamites, perhaps, with Spirula, and other genera of which the whorls are not contiguous, must be ranked among internal shells. If so, the animal, in all probability, swam freely in the water ; and from the comparative abundance of the fossils of this genus, some of them extremely large, the former owners doubtless worked great havoc on the population of the ancient seas of the period at which they lived. It may be observed here, by the way, that, although the species of this genus are not very numerous, the individuals of these few species seem to have been unusually plentiful ; and although perfect specimens are rare, there is hardly a more common fossil in the greensand than the broken pieces of Hamites, some of them measuring as much as four or five inches in the diameter of the chamber.

Coming now to the Baculites, we have a shell at least as fragile as the Turrilites, and of a shape still more exposed to injury from the slightest touch. The siphuncle, too, is extremely minute ; and nothing can be conceived more delicate than the whole appearance of the fossil. There are, however, specimens in the most beautiful state of preservation, and far more complete than any that exist of Turrilites. Probably the shells of this genus, as well as of Hamites, were internal ; but it would seem not unlikely, both from their remains occurring only in the chalk, and also from the unimportance of the siphuncle, that the shell merely formed a light skeleton, covered by the mantle of the animal, and that the necessary prey was obtained chiefly from the crustacea and shell-fish in the calcareous mud.

Such is a slight aperçue of two great families of multilocular shells, the Nautilacea and Ammonoata. Each genus has been considered, both separately and in connection with the others; and it has been endeavoured all along to direct attention to general views, rather than to attempt a minute and technical description of any portion which might seem more peculiarly interesting. It would have been easy to enlarge on the mechanical contrivances in Ammonites, and on the physiology of those animals alluded to of which we have knowledge; but these matters have been already ably discussed, and my object was different. I wished to communicate information, correct, and not too technical, on a very important subject, and to show how far generalization had gone, and to what extent the field was still open: My own ideas are, perhaps, merely fancies, but, such as they are, I let them go forth, trusting that others better able to theorize may also be induced to express their opinions. I now leave this part of my essay, and proceed to the consideration of another family of Cephalopods, called by D'Orbigny "Peristellata" but by Professors Agassiz and Buckland, with more propriety and meaning, "Belemnno-sepia." This latter name has been given since the discovery of a portion of the animal approximating it very nearly to other sepia, from which, however, it differs in the *belemnite*, or *dart*-shape of the stony skeleton, which has long, for that reason, been denominated Belemnite.

AN HISTORICAL SKETCH OF FRENCH LITERATURE.

III.—ON THE JONGLEURS, AND ON THE COMPOSITIONS OF THE TROUBADOURS.

“ Quand les tables otées furent
Cil *jugleur* in pres esturent
S'ont viols et harpes prises
Chansons, sons, vers et reprises
Et de gestes chanté nos ont.”

Roman du Tournement de l'Antichrist.

IN comparing a number of poems by various Troubadours, we cannot avoid being struck with their great similarity; and we immediately observe that one and the same poetical character pervades the whole series: we might imagine them to be the productions of the same poet, executed at different periods and in various moods. There are, it is true, some few striking exceptions: thus, for instance, the glowing and unaffected ardour of Bertrand de Born is easily distinguishable from the frigid and formal affectation of Arnaud Daniel, and this, again, cannot be confounded with the far-fetched witticisms of a Marcabrun. Yet the same spirit pervades their whole literature; we recognize in all their works the same similes, the same metaphors, and the same gallantry. History has recorded no one Troubadour who far outstripped his fellows, no poet who effected any decided improvement in the language; on the contrary, the expressions used by William IX, Duke of Poitiers, the first of the Troubadours, are again observable in the productions of Giraud Riquier, who was the last. All the Provençals are, in fact, equally entitled to fame; there were not wanting among them minds which bore the germ of a more elevated originality, which might, under other circumstances, have been fully developed; at that period, however, the Troubadours had established a certain mode of thinking and certain forms of poetry, to depart from either of which was an unpardonable offence—an offence the perpetration of which was reserved for a Brunetti Latini, and in a still greater degree for his pupils, a Dante, a Boccaccio, and a Petrarch, who, throwing aside, as does the liberated cap-

tive his fetters, all formal and scholastic rules, gave the death-blow to the Provençal, and soon caused its beauties to be totally eclipsed in the dazzling and surpassing brilliancy with which they endued the Tuscan.

With but few exceptions, the Troubadours appear to have been merely the children of nature, uninformed by books, unacquainted with Latin, the ecclesiastical language, and defective in address. The delicate tracery and the elegant simplicity of the classic fictions* seem to have been almost altogether unknown to them; and we find that their imaginative flights are dull and insipid, consisting merely of the objects which immediately surrounded them. Simplicity is the characteristic mark of all their poetry, and we very seldom find any allusion to extraneous sources. This is, perhaps, best seen in their pastorals: in these compositions they crowded together "the foliage of the trees, the fragrantcy of the flowers, the resplendency of the sun, and the warbling of the birds,"† without ever attempting to form a pleasing or a striking picture. Born and bred in courts, however, we may easily conceive that they would have little relish for the beauties of a country life; and though they sometimes attempt the pastoral style their compositions are very inferior, and we find that

* Ovid appears to have been the only classic poet of whom they had any knowledge; his name frequently occurs in their productions, but they do not appear to have studied the beauties of his fables.

"Mas Ovidis retrais,
Qu' entre' els corals amadora,
Non paratge i a ricors.
' Mout eran doutz.'"

ARNAUD DE MARVEIL.

"Qu' Ovidis ditz en un libre e no i men,
Que per sufrir a hom d'amor son grat."

RICHARD DE BARBÉSIEU.

See, also, Diez, *Poesie der Troubadours*, pp. 126-7.

† Bertrand de Ventadour affords one of the most favourable specimens of this style of composition. We have superadded a literal translation.

"Quan la vertz fuoilla s'esperan
E par flors blanqu' el ramel
Per lo dolz chan del auzel
Si va mos cors alegran;
Lanquant vei los arbres florir,
Et aug lo rosignol chanter
Adonc se deu ben alegrar
Qui bon 'amor saup chausir."

When the leaves grow green
And the boughs are loaded with blossoms,
By the sweet warbling of the birds
I feel my heart rejoiced;
But if the trees are in flower
And the nightingale sings,
Then may he well rejoice
— Who experiences an honourable love.

they generally forget the subject, and are glad to return to the more congenial topics of chivalric life.

Though the Troubadours sometimes recited their own compositions, these were generally sung by the Jongleurs, who attended them in an altogether inferior capacity. The Jongleurs* (*joculatores*, *mimi*, *histriones*)† appear to have been of much earlier origin than the Troubadours, as we find that, even in the ninth century, their licentiousness and immorality was severely censured by the chroniclers of that period.‡ Charlemagne, in the first capitulary of Aix-la-Chapelle, speaks of them as persons branded with infamy, and expressly forbids their admission into convents. They appear, in fact, to have been the strolling players or mountebanks of the period; and, roaming from castle to castle, they were always heartily welcomed, and amply rewarded with horses, clothes, and money. A song or a romance was the only pay given for the most sumptuous entertainment; thus, Jean de Chapelain, in his *Fabliau du Sacristain du Clugny*, assures us that in Normandy this was the only reward that was ever given to the host.

"Usage est en Normandie
Que qui hebergié est qu'il die
F'able ou chanson a son hoste;
Ceste coustome pas n'en oste
Sire Jehans li Chapelain."

The Troubadours, as well as the Jongleurs, attempted to perpe-

* There have been many opinions in regard to the etymology of this word. M. de Ravalière ingeniously derives it from *ongle*, a nail, *ongleur*, a thrummer of instruments with the nail; as most of the instruments then in use were played with the fingers.—Ravalière, *Poésies du Roi de Navarre*, tom. ii, p. 255; Burney, *Hist. of Mus.* vol. ii, p. 267.

† There appear to have been several orders of Jongleurs. Thus, when they recited the numerous romances of the day they were called *Contaidres*, or *Discours*; when they imitated the sounds and voices of animals they were called *Contrafasadors*; and when they performed dramatic pieces they were termed *Mimes* or *Histrions*.—Diez, *Poesie der Troubadours*, pp. 45—46; De La Rue, *Hist. des Jongleurs*, &c. vol. i, p. 104.

‡ "Necit homo qui histriones et mimos et saltatores introducit in domum suam, quam magna eos immundorum sequitur turba spirituum."—Alcuinus Albinus, ep. 107—836. "Inebriat histriones, mimos turpissimos turpissimosque et vanissimos joculatores Agobardus." See also Du Cange, under *Jociata*, *Jocularis*, *Joculator*, *Ministelli*; Muratori, *Antiq. Med. Ævi*, tom. ii, p. 632; Diez, *Poesie der Troub.* p. 15; Percy's *Reliques of Ancient Poetry*, vol. i.

tuate this universal hospitality; and the motto, "To give is nobler than to receive," frequently occurs in their poetry. Deude de Prades says, "It is truly pleasant to benefit the good, to honour Jongleurs, to love good company, and to give before one is asked."* On the appearance of the Troubadours in southern France the Jongleurs appear to have attached themselves to that body; their principal occupation was to recite the *trouvres* of the Troubadours, which they accompanied with instrumental music.

The number of instruments a knowledge of which was necessary for the expert Jongleur, is almost incredible. Giraud de Calanson, a Jongleur, or rather self-elected Troubadour, in a *sirvente*, which has been translated in his usual happy style by Burney,† numbers upwards of ten; the harp, the guitar, and the *vielle*, which was played with a bow, and appears to have been very similar to the violin of the present day, were, however, most in use. Besides the compositions of the Troubadours, the Jongleur was expected to recite the metrical romances and tales which the vicissitudes of the times rendered so numerous. He was also required, during the intervals of the songs, to amuse his auditors with a thousand ridiculous feats. Giraud de Calanson, in his *sirvente*, says that the Jongleur must be able to "throw and catch little balls on the points of knives; that he must imitate the songs of birds, exhibit attacks of castles, leap through hoops, and show the performances of tamed monkeys." Thus prepared by the advice and example of one of the most illustrious of their body, the Jongleurs pursued the most grovelling and degrading occupations, and soon became the mere buffoons and laughing-stocks of an ignorant multitude. Though debased in profession, they appear to have greatly increased in numbers, as we find that, at the end of the reign of Philip Augustus, they formed corporate bodies in nearly all the towns in France, had certain privileges allowed them,‡ and had chiefs over

* "Joios soi eu et al mestier,
De far plazer a bona gen,
D'onrar joglars, d'amar joven
De dar enans qu'om no mi quier."

(*Parnasse Occitanien*, p. 86). The Dauphin d'Auvergne, who was also bishop of Clermont, a man of immense wealth, appears to have carried his hospitality to such an extent as to sacrifice nearly the whole of his fortune. "E per larguesa soa perdet la meitat e plus de tot lo sieu comtat."—Raynouard, *Choix des Poésies des Troub.* vol. v, p. 124.

† *Hist. of Music*, vol. ii, p. 270.

‡ Their principal privilege appears to have been their exemption from

them, whom they called "Rois de Jongleurs." In process of time the Troubadours appear to have been confounded with the Jongleurs;* and it is to this too close connexion with this degraded class that they themselves ascribe their ultimate decay. To so great an extent did they carry their licentiousness and depravity, that Philip Augustus, their great and generous patron, whose court resounded with their songs, involving Troubadours and Jongleurs in the same disgrace, banished both from his court;† and though they were shortly afterwards recalled, a stigma always remained attached to their order, a brand which neither an increased austerity of morals, or redoubled efforts of genius, could ever entirely efface. If, in addition to these causes of decay, it be remembered that at this period, the attention of all lovers of poetry was so forcibly attracted by the compositions of the immortal Italian trio; if it be remembered that the Tuscan language, imbued with the choicest beauties of the classic fount, was

tolls at the entrance of all towns, provided they sang a song and made their monkeys dance to the tollman: hence arose the well-known proverb, "*Payer en Gambades et en monnaie de singe.*"—Burney, *Hist. of Music*, vol. ii, p. 273; De la Rue, *Essais sur les Jongleurs*, &c. vol. i, p. 118.

* Rambaut de Vaqueiras, a man of noble descent, and an especial favourite of the Marquis of Montserrat, by whom he was knighted, gives himself these appellations:—

"Et es razos qu'eu mi podetz trobar
Testimoni, cavalier e joglar."

(Raynouard, tom. ii, p. 262). Pierre d'Auvergne, in a satire, which he expressly states to be directed against certain of the Troubadours, shortly afterwards, particularizing some of that body, calls them Jongleurs.

"Chantarei d'aquetz trobadors."

He afterwards says—

"E'l quartz de Briva'l Lemozis
Us joglaretz pus prezenis . . .
El seizes N'Elias Gausmars
Qu'es cavayens e—s fai joglars."

(Raynouard, tom. iv, p. 297).

† It is on account of this disgrace that we never find any eulogium of this monarch in the productions of the Troubadours: his name appears, in fact, to have been studiously omitted in all their poems, as we find copious mention of all the other monarchs of that period.— Their banishment took place in the year 1181—De La Rue, tom. i, p. 247; Rigord et Megeraz, *ad ann.* 1181.

encouraged and cultivated by men whose productions are now, as they were then, the wonder and the admiration of the world ; if these adverse circumstances be duly remembered and carefully weighed, we shall then clearly see the reasons of the rapid decay of the Troubadours ; we shall then observe the causes of the extinction of a school of poetry which, useless and trivial as it has been thought by many, may be regarded as the twilight of modern excellence. And though the songs of the Provençals contain no exquisitely given morals or beautifully turned metaphors, let us never forget that they introduced a love for reading and a taste for poetry, and that the firm and solid foundation, on which the literature of the present day is based, had its origin with the Troubadours.

The compositions of the Troubadours are altogether lyric ; and we are astonished to find that, despite the love of poetry which seized, as it were an epidemic, the whole nation, they have not made a single attempt at an epic or a tragic style. The education of the Provençals was altogether calculated to render them enthusiasts ; this feeling was, in fact, the ruling passion of the age, and we have seen that the "*preux chevalier*" was ever taught to be enthusiastic in religion, in love, and in war. Enthusiasm also is the leading characteristic of lyric poesy ; this feeling it is which, if properly directed, fires the imagination of the poet, animates the dormant faculties of his mind, and hurries him into those impetuous transports of fancy which, soaring far beyond all definite limits, produce those fascinating effects which far transcend the regularity of the most studied compositions. Under its benign influence, descriptions rich, happy, and sublime, expressions noble and harmonious, metaphors striking and lively, spontaneously arise to captivate the imagination and enchant the mind of the reader : and the man of genuine taste cannot read or hear a production of this divine enthusiasm of the mind without feeling some of that poetic rapture which produced it.

The literary relics of the Troubadours have, by criticism, been divided into the gallant, historical, satirical, didactic, and pastoral. Their gallant or love poems are, perhaps, their most numerous performances, but have not now much to recommend them. The spirit of chivalry is everywhere perceptible ; and we find an enthusiastic and almost idolatrous love of the fair sex. The tender passion is, however, generally, grossly misconceived : the lover's was a mere trial of wit, in which sentiment played round the head, but came not near the heart. It is also much to be regretted that too many of

this class of poems bear the stamp of undisguised libertinism,* and but little accord with the refined feelings of the present day.

Their historical pieces, as their name imports, were illustrative of the history of the times. Useful as these productions doubtless were, their utility might have been greatly increased had they been more select in their subjects, or more exact in their narration; as the only other chroniclers of the age were the monks, who, buried in their convents, were totally unacquainted with life, and were generally as superstitious as they were ignorant. These compositions are, however, chiefly valuable as tending to display, in the most distinct and simple manner, the customs, habits, and sentiments of the times. When these are the productions of men illustrious by birth, station, or merits, they acquire a two-fold interest, and may truly be handed down as the choicest relics of the age. The *sirvente* of Richard in his German prison, and several others of the same class, present the most natural, the most "naïve" picture of the sentiments and characters of their authors, and are, therefore, subjects of the greatest interest.

Their satirical productions are numerous, and are often of the greatest value. They, however, too frequently misused the lash, and condescended to compose personal invectives and injurious attacks against the enemies of their present patron, their rivals in verse, and not unfrequently against the ecclesiastics of the period. The poets who carried this to the greatest extent were Pierre d'Auvergne and the Monk of Montaudon, both of whom have been designated "*The Lash of the Troubadours*;" on a perusal of their effusions, however, we shall be more inclined to despise the lash than the victims. The proper subjects for satirical writings are the follies and foibles of mankind; and the satires of the Troubadours acquire additional value when, spurning all private feuds and selfish interests, they unsparingly brand and caricature the vices and explain the manners of the age. A perusal of these compositions will give us but little reason to regret the customs of what we so complaisantly term the "good old times." There we see branded, oppression of serfs, perjury to friends, innumerable cruelties, continual robberies, insatiable rapacity, and unbounded licentiousness—there we see exposed enormities at

* One of their most enthusiastic admirers, St. Palaye, in his *Histoire Litt. des Trouv.* thus speaks of their amatory poems:—"Je l'avoue les fades lieux communs de galanterie, les répétitions fréquentes des mêmes expressions, le longueurs et le mauvais goût rendroient insupportable un recueil complet de leurs ouvrages."—*Discours Prélim.* tom. i, p. 64.

which we shudder, and crimes which "harrow up the soul;" and yet these are the manners and customs of the "good old times," which we still love to recal, and in recalling to regret.

Their didactic pieces are few in number, and much limited in their scope and tendency. Some few comprise maxims of universal morality; the greater part, however, contain instructions for the benefit of the different classes of society, to the candidates for knighthood, to the ladies, the poets, and the Jongleurs, detailing the path which each is to tread in order to attain pleasure, profit, or renown. Some of their moral sketches may be ranked among their happiest efforts; and we find that the tedium of continual advice is enlivened by occasional gaiety, and in some few instances rendered still more agreeable by the beauties of fiction.

Their pastorals are, as we have before mentioned, few in number, and in composition very inferior. And certainly, though few styles of poetry have attracted more writers than the pastoral, how few of them (even in modern times) deserve to be ranked higher than as mere imitators? The pastoral descriptions and metaphors used by Theocritus, have been used as hereditary property by all succeeding poets; and the allusions and similies of the old Sicilian meet us again in the works of most of his poetical successors. If, then, even now, we fail in this species of composition, we cannot be surprised at its inferiority among the Provençals, whose style of living and manner of thinking were so totally averse to it.

A more enlarged account of their productions, as also a brief history of some of the more celebrated Troubadours, we will reserve for a future article.

CRITES.

* One of the best treatises on pastoral poetry is to be found in the *Ram-bler*, where, describing the pleasures arising from a country life, he says, "The sense of this universal pleasure has invited numbers without number to try their skill in pastoral performances, in which they have generally succeeded after the manner of other imitators, transmitting the same images in the same combination from one to another, till he that reads the title of a poem may guess at the whole series of the composition."

(To be continued).

THE MUSICIAN ABOUT TOWN.

THE triennial festivals for the three choirs of Worcester, Gloucester, and Hereford, have for some years past turned out to be little better than an expensive as well as troublesome office to those resident gentry who liberally engage to undertake the duties of stewards: for in striking the balance between the receipts and the expenditure it is almost invariably found that the stewards have a large sum to make up among them, in order to meet the deficiencies. This was the case after the Gloucester meeting, held in September last, although the only festival of the year. One of the principal reasons advanced for these defalcations (and every one acknowledges its plausibility) is, the ridiculously disproportioned sums that are given to the foreign artists who happen to be the favourites of the season at the Italian Opera, three of whom would swallow up the engagements of *two hundred* efficient chorus singers. The reputed sum paid to Grisi alone at Gloucester was equal to that received by one hundred of the chorus, coming from London, and who were to lodge and feed themselves for a week, at a season, too, when both those necessities of life are always at a premium. The presence of those eminent artists is, doubtless, a source of great attraction upon such an occasion, but it is questionable whether their influence is so powerful since the more intimate intercourse of the resident gentry with the metropolis; who, be it remembered, can and do hear them at considerably greater advantage in their own arena—the Italian Opera House. They of the neighbourhood where the festival is held, to whom such a singer as Grisi would be the greatest novelty, are precluded from the gratification of hearing her on account of the high prices for admission to the performances. If the second-class seats were let upon lower terms, or if there were a third division for the audience at—say five shillings each ticket, it is scarcely to be believed that the second-class seats would be more deserted than they now are, while numbers of the townspeople and small tradesmen who, under the present system, will gratify themselves by one performance only, would then subscribe to the whole series. We know that there is a little aristocratic check which has hitherto prevented the stewards of these festivals from admitting “the lower orders,” and this feeling is, in every sense, an unworthy one. They are associated with their plebeian neighbours every Sunday that they hear service in the cathedral; and we all know that they can waive this fastidiousness when, upon *other* occasions, the co-opera-

tion of the plebeian is indispensable. We plead for no indiscriminate mixing up of the classes in society ; there must and will be Gibeonites in the camp. But he must be unobservant indeed who cannot perceive that a finer tone of civility has of late years pervaded the deportment of our " hewers of wood ;" and we believe that as, in proportion to their mental culture, men more accurately estimate their own position in society, and are prepared to render justice to that of their superiors (for it is the brutal only who are mere levellers of all distinction), so we believe that, effectually to maintain that distinction, the " lower orders" should be courteously admitted to all public institutions, and above all to those great associations whose object and tendency are to refine the feelings and soften the character : and therefore (returning from this digression) we believe that the stewards of the three choirs will consult the interests of the charities, and their own true dignity, by erecting galleries and issuing tickets at low prices, for the accommodation of the humbler classes. The committee for the Worcester festival, which will take place next year, and the members of which, we understand, have already begun to make preparatory arrangements, will, we hope, take our suggestion into consideration.

The fullest audiences at the Gloucester festival were assembled on the performance of the " Messiah" and " St. Paul ;" at the evening concerts the chief attractions were, as might be expected, the singing of Grisi, Ivanoff, and Lablache. Mad. Albertazzi's engagement was fortunately annulled, from her being unable to fulfil it, on the score of indisposition. The rupture of her contract with the Gloucester committee, as also subsequently with Dr. Camidge of York, at whose subscription concerts she had entered into a treaty, and was advertised to sing, created an undue emotion in the newspapers, with more proing and conning than fifty people in the country cared about for one moment. As regards Dr. Camidge, we should suppose that his disappointment at the absence of Mad. Albertazzi involved no pecuniary loss, while in the case of the Gloucester festival it must have been a positive saving to the stewards of £300., the reported sum which they had consented to pay the lady for her services. After the deplorable exhibition which Mad. Albertazzi made at Hereford the year before, it was a subject of surprise to every one that the Gloucester committee should have consented to treat with her upon any terms (for they did not want her) ; and most especially were the profession annoyed at the sum which Mad. Albertazzi was to have received, when the most eminent of the instrumentalists, upon the same occasion, had been per-

sueded to accept lower terms than they had ever taken at any previous festival. The fact is, had the band been equally unyielding with the foreign singers, the Gloucester festival for the present year must have dropped through altogether. The result of this conduct on the part of the band will be, that it will form a precedent for other festival committees to offer them *char-work* terms, in order that they may be enabled to meet the extravagant demands of the foreigners; and in the event of the instrumentalists striking for their old wages, the committees will reserve a few good names to make a show in the bill, and fill up the orchestra with waifs and strays and academy boys, whose cue (and it is a laudable one) is, to consider remuneration a secondary object when barking for engagements.

The theatres have hitherto made but little progress in musical matters this season; for Drury Lane (which is now essentially an English opera house), with its excellent company of singers, its musical conductor, and first-rate band, has, in sea phrase, made no head-way at all. A system of puffing that would turn the stomach of a rhinoceros; the vulgar style of *dragging*—not bringing—pieces out; and the snow-storms of orders nightly showered into the house, have plunged this once flourishing establishment into the very mire of contempt. The season opened with Mozart's *Don Giovanni*, in which Mr. Balfe was the hero, and he filled the part with much ability. Phillips's Leporello wanted bustle and humour; qualities which Giubilei, with his Italian blood and associations, successfully infused into the character of Masetto. Miss Betts and Miss Poole were the Donna Anna and Elvira, and Mad. Albertazzi, whose accession to the company for a few nights was announced in corpulent type, performed the part of Zerlina. This undue exaltation of the lady's name in the bills above the other characters in the opera, proved to be a detriment rather than a benefit to it. The manager did no more when he had engaged Malibran; and the consequence was that exclusive attention was directed to Mad. Albertazzi, who, from the tameness of her performance, which was stagnant as a fish-pond, disappointed every one. Had she been set down for the part of Elvira, and Miss Romer (who has ten times her energy and vivacity) taken that of Zerlina, the cast would have been more complete. In the part of Annette in "*La Gazza Ladra*," Mad. Albertazzi was greatly successful. She has been educated in the modern Italian school of music, and, we suspect, is intimate with no other. Since the completion of her engagement, which occupied about a month, the company have been repeating their old stock pieces, the

"Maid of Artois," "Gustavus," "Fra Diavolo," but with no effect upon the town. Braham, too, has made his appearance at Drury Lane, and, for his reputation, injudiciously. He never filled his own theatre, the St. James's; and it is not easy to conceive what there can be in the atmosphere of a house more than twice its size to produce any change in public curiosity. There has been one new opera brought forward here, entitled, "Francis the First," the music by Mr. E. Loder. As regards the piece itself, it may be said to be a revival of the old "Mysteries;" for Francis the First must have been a mystery to every body: to the writer, for he must have performed his task "by faith, and not by sight;" to Mr. E. Loder, who, it is said, composed the music without being admitted to the arcana of the plot and dialogue; and to the audience it proved an undoubted mystery, though not a reverend one. The consequence was, notwithstanding the turbulent and interested zeal of some present, the audience came away hardened heretics.

At Covent Garden but one original musical drama has hitherto been produced this season; if that can be called original in England when both the plot and music are of French extraction. It was entitled "Barbara:" the music, which is pretty, is by the younger Boieldieu. Contrary, however, to the expectation of the management, as well as the performers, the existence of Barbara extended to only a few nights. It should seem that, as regards the productions at this theatre, the public have demanded too high a standard of excellence; for we have witnessed the quick dismissal of pieces this season, which would assuredly, in any other metropolitan theatre, have reached the average longevity of all such as pretend only to while away an odd three quarters of an hour. If, however, Mr. Macready be subjected to these little disappointments (the troublesome accompaniments of possessing too good a character), he is a fair example of what the public *will* do for a man of real merit and energy, who also is determined to gain their favour; and he is an example, too, of the small portion of influence the newspaper press has with that public, when *they* are resolved to be pleased. The unjust treatment he received from the daily press last season was the constant remark of all who had witnessed his exertions and success in reproducing the finest works of the finest of all dramatists. The revivals, for instance, of the Coriolanus and the Macbeth, which for splendour and propriety were never even equalled, and the performances of which were repeated, perhaps, thirty times in the course of the season, were coldly recorded by some of the daily papers in a paragraph of about ten or twelve lines: whereas some

worthless gewgaws, produced elsewhere, that no puff (preliminary or immediate) could keep alive for a fortnight, were lauded and re-lauded through persevering columns of small type. Setting aside the injustice of all this, the reporters have not been "wise in their day and generation;" for they have distinctly shown to other caterers for the people's amusement, how much they must depend upon themselves, and how little upon puff paragraphs, for support. No flourish of trumpets, for example, was made, and none was required, to introduce "The Tempest, according to the text of Shakspeare." When the time came, the thing spoke for itself; and one benefit, if no other, will accrue from the excellent judgment and superb style in which it has been brought out, viz. that this divine play can never more be profaned by the gross, the monstrous alliance forced upon it by the ribaldry of Dryden and Davenant. No future revival of the Tempest must be contemplated in a relaxed spirit; and none surely can well surpass the present one for carrying out the sweet imagination of its author. One omission only in the original arrangement of the play is to be regretted, and that is, the admirable opening scene of the storm *on board the king's ship*. Brisk and stirring as this is, however, in the text, it is, perhaps, questionable whether the machinist could have succeeded in presenting to the audience an illusion so complete as to have warranted the attempt. Even in the most perfect of theatrical machinery the senses are never wholly hoodwinked; and so unreasonable are the public in matters of this nature that the greater the attempt, the less appears to be their consideration for a failure in it. The musical department of the Tempest was filled in a more than creditable style—it was excellent. Mr. T. Cooke, to whom the praise is due of selecting the inter-act music, evinces both taste and judgment in choosing those charming movements from Corelli, who was contemporary with Purcell; and the manner in which he arranged them for the full orchestra has received general commendation from the musical professor and amateur. So complete, indeed, has been the satisfaction expressed and felt by the musical public with this portion of the entertainment—the simply beautiful harmonies of the old Italian composer, accompanied with the exquisite melodies of the illustrious Henry Purcell—that we happen to know the fact of one of our most eminent professors having three times paid his admission to the boxes for the pure enjoyment of the music. The memory of Purcell's music never can wholly pass away, although the manner of performing it has unfortunately become traditional: but

the melodies themselves must ever remain fresh and green with all who appreciate a natural and forcibly direct expression ; for all his phrases, like that which has been defined to be the purest style of literary composition, viz. "proper words in proper places," seem to be instinctively the very—indeed, the only—media through which the sentiments of the poet can be conveyed in musical sounds. With a genius which, upon numerous occasions, prompted him to anticipate more than a century of improvement in counterpoint, Purcell was imbued with a poetical temperament which at once dictated to him the full force of the meaning which he was to convey in melodious phraseology. Not to instance his well-known secular compositions, examples of eminent felicity in forcible and natural expression may be found scattered through his anthems and other sacred works. To the professor and amateur not already acquainted with them, we earnestly recommend the two anthems, "Who hath believed our report ?" and "My beloved spake," the latter from the Solomon's Song ; compositions totally opposite in character, and yet vieing with each other in profound learning and an anticipation of the modern resources in counterpoint, together with so easy and sweet a naturalness of character that it appears as if no different form of expressing the sentiments could be rationally contemplated. The great charm in Purcell's music is, that not only is it no reflection of any other school, but that its profoundly scientific construction never clouds or obstructs the clear beauty and progress of his melody. He is a difficult author for the modern sciolist, because he is all expression, and never sacrifices the sentiment of a passage to an unmeaning roulade, or piece of vocal execution. His songs are the very antipodes of a modern singing-master's studio. To conclude, then, our notice of the performance of the *Tempest* at Covent Garden Theatre, the musical department would do credit to any establishment. The principals (Miss Horton more especially, as Ariel) sang the songs with characteristic simplicity ; and the chorusses were so well drilled that even the boasted German company could scarcely have surpassed them.

The *Tempest* has been followed by the production of Knowles's "William Tell," with a selection from the best chorusses, and concerted pieces from Rossini's opera ; and the entire opera, under its original title of "Guillaume Tell," was brought out at Drury Lane on the same evening (the 3rd instant). The manager of the latter theatre, with his usual disregard of accuracy, when it suits his purpose, publicly announced that this was the first time the mu-

sic of this opera would be heard in England: the fact being that, only a few years ago, a very considerable portion, and all the finest of the movements, were performed in the same theatre in an opera entitled "Hofer." So curtailed, with Miss Stephens, Mad. Vestris, Sinclair, and Phillips, as the principals, it did not then remunerate the manager: and now, we apprehend, the chance is not more favourable for the treasury, although it has been got up with great care and pains, and that the principals, Misses Romer, Betts, and Poole, Messrs. Braham, Allen, and Giubilei, exerted themselves to the best of their abilities. The cause of the public lukewarmness appears to be that, fine as the music is (for it is avowedly Rossini's master-piece as classical composition), the audience become wearied with its length and disgusted with the libretto: the lessee has, therefore, acted wisely in retreating to his *ottadel* of wild beasts. They have been his preservers this season; Van Amburgh is, therefore, re-engaged. The chorusses in the *Tell* at both houses were a credit to each establishment; the general opinion, however, is, that at Covent Garden there was not only greater vocal strength, but more precision, with attention to light and shade in the performance: and indeed we have rarely heard a finer piece of dramatic music than in the celebrated conjuration chorus upon the assembling of the patriots. There were more than two hundred people on the stage. Mr. Land is entitled to high commendation for the zeal and assiduity he displays in his department of chorus-master. What the operatic company most needs at this house is, a tenor singer. The ladies Rainforth, Horton, Serle, are equal to all that may be required of them, and Leffler is a good substitute for Phillips, and a better actor: Manvers, with practice and care, will become essentially useful to the establishment; but Mr. Frazer is positively injurious to any composition that may be entrusted to him. His manner of singing—for style he has none—is vulgar, and the incorrectness of his intonation formidable. Nothing could possibly exceed the horror of his concerted singing in the opera of *Barbara*; and indeed it was the general opinion that the manifestation of disapproval against the piece might principally be traced to the performance of the person so preposterously engaged to fill the situation of principal tenor at the principal theatre in the country.

The Sacred Harmonic Society gave their first public concert for the present season on the 14th of November, when the spacious area of Exeter Hall was crammed to an overflow. The audience must have comprised at least two thousand persons. Very many

musicians and amateurs were attracted by the novelty of hearing the entire oratorio of "Samson," the first time of its being so performed for, we believe, more than fifty years. All our readers even moderately conversant with musical literature are aware that the plot of Handel's "Samson" comprises the same portion of event in the blind hero's career as that selected by Milton for his magnificent tragedy, viz. the course of action subsequent to the treachery of Dalila, concluding with the destruction of the temple and all the assembled Philistine lords; also that a large portion of the words of the oratorio were selected from the same drama and other poems of Milton, by Dr. Morell, of Chiswick, who also supplied original lines of his own, to render it apt for musical representation. It has been said that Handel considered this work, and which he composed in 1742, the year after ~~the~~ the Messiah, to be so nearly equal in merit to the latter production, that he could not make up his mind which should take precedence of the other. With all the diffidence which should attend the slightest dissent from such an authority, we are constrained to confess that the above opinion (if Handel ever did pronounce it) is but another instance of the proverbial incompetence of authors to decide upon the comparative excellence of their own works; a decision not unfrequently the consequence of the exertion, more or less, which the production has cost them. In one feature only do we feel that the Samson is a work of higher classical beauty than the Messiah, and that is in its recitatives, which may, perhaps, be ranked as the very triumph of Handel's power in this branch of composition, many of them displaying matchless energy and strength of character with propriety of expression: and yet we nevertheless cannot conceal the fact from ourselves that we could have been content with a less abundance and continuity of the recitatives—in short, we became wearied with them. This large proportion of dialogue in recitativo imparts a character of monotony to the work, from which the scattered airs and concerted movements do not altogether (at least to our feelings) relieve it. If, however, we turn to the other features of the two oratorios, the pre-eminence of the Messiah becomes distinct indeed. The airs and duets in the Samson distinguished by their merit, are to be quickly enumerated; whereas several of a lower grade, we dare to say, are not merely uninteresting, but positively tedious. Such a judgment could not be awarded even to four out of the numerous perfect solos which shed their lustre over the Messiah. And when we proceed to compare the chorusses in the two oratorios, the one last named advances still

higher claims upon our admiration and consequent preference. Some of those in the *Samson*, and which it is not necessary to enumerate, are doubtless perfect of their kind ; while others are avowedly commonplace, if not meagre. Which of the chorusses in the *Messiah* is amenable to this detraction ? In short, it is incredible that Handel should have hesitated between the two works ; notwithstanding which, it is our belief that the gems in the *Samson* have never been surpassed, even by the composer himself.

The solo singers upon the present occasion were Miss Birch, Miss Wyndham, Messrs. Bennett, King, J. O. Atkins, and Phillips. The first young lady is entitled to distinguished approbation for the correct and uniformly careful manner in which she sang the airs allotted to the part of Dalila : and this is a feature in Miss Birch's professional conduct which must always secure to her the partiality of her audience. She at all events thinks it worth while to study her music before she goes into an orchestra ; and, consequently, she "hath her reward." For Miss Wyndham we have felt a strong interest ever since we first heard her in public ; because we believe that she possesses great capabilities, without having had a fair chance to give them free scope and action. Her voice is a rich mezzo soprano, full, and pretty equal through all its compass. There is a cordial expression in its tone which at times brings a remembrance of Malibran. Miss Wyndham however, has been educated solely in the modern Italian school of music, and not well even in that school ; and we are justified in concluding that she is not familiar with the style of Handel, seeing that she does not sing his music after any rule, traditionary or rational. We can make allowance for want of due energy in her delivering that fine recitative, "O, change beyond report !" because she was in all respects upon new ground : she therefore appeared to be feeling her way ; and we have little doubt that this was literally the case ; hence the impression upon her audience was, that she would come to a stand, for she dragged laboriously. The same defect appeared in her taking that serenely solemn and desponding air, "Return, O God of Hosts," which, nevertheless, she sang with a pathos and feeling of her subject that induce us to desire earnestly of her to procure a twelve-month's first-rate instruction and severe study in Italy ; for we have at present no English singer having her compass of voice, with its quality and capability of improvement.

Mr. Bennett sang the whole of the music allotted to *Samson* with exceeding care and good judgment. We have no native singer who

enunciates his words with more distinctness than he ; indeed, a stranger to the oratorio might have followed him without the assistance of the programme. If for no other accomplishment requisite to complete a singer, Mr. Bennett may be listened to with advantage by most of our native artists, for his distinct declamation.

Mr. Phillips was what he always is in music of this school, sensible, clear, and energetic. His delivery of the giant Philistine's opening recitative, "I come not, Samson, to condole thy chance," was a piece of masterly effect in singing.

Of Mr. Atkins the less said—justly, the better ; for he was constantly out of time and tune, and occasionally out of his depth. Incompetence with assiduity are entitled to forbearance ; but ignorance with self-complacency, who can bear ?

The choruses, upon the whole, went tolerably. "Then round about the starry throne ;" "Fix'd in his everlasting seat ;" "To dust his glory" (which was beautifully expressed), and the finale, were all excellent ; and the chorus of virgins, in dialogue with Dalila, was one of the most perfect specimens of unisonous singing from a large number of voices we ever heard.

The oratorio of "Solomon," with its half dozen magnificent double choruses, was performed on the 5th instant. The whole of the music for the principal character was written by Handel for a soprano voice, and scarcely with propriety : it was, however, even less judicious in the directors of the performance in the present instance to divide the airs and recitatives between a mezzo soprano and a baritone voice. It was preposterous to hear Miss Birch (Miss Wyndham was engaged to take the air) singing, "What though I trace ;" and, immediately after, Phillips delivering the recitative "And see, my queen." The solo singers were Misses Birch, Wyndham, and Woodyatt ; Messrs. Hobbs, Alfred Novello, and Phillips.

The directors of the Royal Academy having lately come to the resolution of appropriating one day in the week to the practice of classical music with the full orchestra, we had the pleasure of being admitted to a rehearsal of Mendelssohn's psalm, "As pants the hart ;" the first verse of which is one of the most charming choral movements he has hitherto produced. We may take a future opportunity of giving a detailed account of the whole composition when it is performed at the first Academy concert, which will not take place till this article has gone to press. Suffice it to say, for the present, that we were much gratified with the steady performance

of the pupils, and equally so with the solo singing of a young lady, whom we understood to be under the tuition of Mr. James Elliott, Miss Romer's instructor, a man, in all respects, competent to the task of forming an accomplished singer, being not merely a thorough practician in his art, but, moreover, possessing a natural and cultivated taste in the sister arts of poetry and painting—valuable accessories, if not positive necessities, to form a perfect singer; for no one can rise into the highest station of any branch of the fine arts, who possesses not a close sympathy with the spirit of beauty under all its phases and appliances.

SKETCHES OF EUROPEAN ORNITHOLOGY.

GOULD'S "BIRDS OF EUROPE."

SEVENTEENTH PART.

THESE Sketches, first projected and actually "commenced by ourselves,"* events of a private nature have, for the last two years, prevented us from continuing. For the Analysis of the first four Parts only of Mr. Gould's incomparable work, are we, consequently, responsible.

Deeply sensible of the great superiority of the articles which have subsequently appeared, under this *borrowed* title, in the *Analyst* and *Naturalist*, we should deem it an act of flagrant and indelible dishonour to arrogate to ourselves the merit of other writers; and hence has arisen the necessity of the present explanation. Still, having

* This assertion will naturally excite surprise in those who have had the good fortune to peruse an article entitled "Sketches of European Ornithology" published by MR. NEVILLE WOOD in a late number of the *Naturalist*. They, however, who feel at all sceptical on the subject, may have their doubts removed by turning to pages 99 and 280 of the third volume of the *Analyst*. If this be not satisfactory, we refer them to page 196 of the *Ornithologist's Text-book*, a work professedly emanating from Mr. Neville Wood himself. *FALSA vincere veris* is our family-motto; a motto, unfortunately, but too applicable on the present occasion.—P.

been called upon to consummate a work which, however feebly commenced, has been so magnanimously prosecuted, we resume our labours in all the humility of spirit inspired by a sense of unspeakable inferiority to that man who, in the hour of need, so kindly and considerately stepped forward to relieve us from our burden. Favours, emanating from a noble mind, are rendered peculiarly estimable by the unobtrusive grace and delicacy with which they have been conferred.

PLATE I. exhibits a not very correct, rather clumsily drawn, yet well-coloured figure of the Woodcock,—*Scolopax rusticola*,—le Bécasse ordinaire, *Fr.*,—Beccaccio, *It.*,—Wald Schneppe, *G.*,—Houtsnep, *Dutch*. The migrations of this well-known bird extend from the Arctic circle to Asia. Eggs: four, yellowish-white, blotched with pale chesnut-brown. From the peculiarity of form, manners, and habits which characterize the Woodcock, Mr. Gould proposes that, with one or two other species, it should constitute a new genus under the title of *Rusticola*, already employed by Vieillot. It figures in the Systematic Arrangement of our former Derbyshire Correspondent, under the name of *R. migratoria*, or Woodoc! A more unobjectionable designation than *Rusticola* might readily be devised.

PLATE II. Red-headed Pochard,—*Fuligula*—olim *Anas ferina*,—Canard Milouin, *Fr.*,—Anatra Penelope, *It.*,—die Taffel-Ente, *G.* Figures of the male and female, exquisitely drawn and coloured. The London markets are supplied with great quantities of the Pochard: it is there known by the name of Dun-bird. Food: aquatic plants and *Mollusca*. Eggs: twelve in number and white. Breeds in marshes.

PLATE III. Bartram's Sandpiper,—*Totanus Bartramia*,—Chevalier à longue queue, *Fr.*,—der Langgeschwanzte Strandläufer, *G.* It is the *Tringa Bartramia*, of the American Ornithologist, Wilson; by whom it was first discovered and described,—*Tringa longicauda*, of the German Bechstein. A native of North America; two or three specimens only have been taken in Europe. Food and propagation unknown. The figure of the adult male before us is very nicely drawn and coloured. How obviously preferable is the specific designation, *longicauda*, expressing, as it does, a marked external character of the bird, to that derived from the name of an ornithologist alike unknown, and uncared-for, by us!

PLATE IV. Hedge-Accentor,—*Accentor modularis*,—Accentor mouchet, *Fr.*,—Schiefer-breustiger Sanger, *G.*,—de Winter Zanger, *D.* This elegant little bird, the Hedge Sparrow,—*Motacilla*,—*Syl-*

via modularis, le Mouchet, Traine buisson, ou Fauvette d'Hiver, of the older ornithologists,—is here very charmingly delineated in two figures, male and female. The only defect is that the figures are much too large. All the other species of *Accentor*, a genus instituted by Cuvier, are, with one exception, peculiar to Europe. Our favourite little songster breeds in March. The bright-blue eggs are familiar to every school-boy. Even this passing aversion to them still serves to call up, with us, the splendid yet mournful apparition of departed days.

PLATE V. Capercaillie or Cook of the Woods,—*Tetrao urogallus*,—Tétrao Auerhan, *Fr.*,—Gallo di Monte d'Urogallo, *It.*,—Auerwaldhuhn, *G.* This noble bird, the largest of the Grouse-Family, formerly inhabited the forests of North Britain; but it has long been extinct. It is still common in the pine-woods of the mountainous districts of Europe, and more especially in those of Sweden and Norway, from whence the London markets are principally supplied with it. Many laudable attempts have, of late, been made to re-introduce into congenial situations of our islands, and again naturalize among us, this "Prince of game-birds." With the issue of these experiments we are, at present, unacquainted. *T. urogallus* and *Tetrix* differ essentially, in their habits and character, from the other species of the Grouse-Family. They are more decidedly arboreal; and the horny papilla, with which their feet are furnished, enable them to grasp securely the slippery branches of the pine and other Alpine trees. The male is polygamous; and associates with the female only during the breeding season. The latter lays from eight to sixteen eggs, of a yellowish-white colour spotted with a darker yellow, in a nest constructed amidst brakes and underwood; and rears her young in seclusion. The trachea of the male bird forms a convolution at about three-fourths of its length, between the branches of the fork-bone. The curvature of the tube, after rising nearly an inch and a half, descends afresh, by the left side of the gizzard, over the cervical muscles into the lungs. Two muscles, one line broad, attached on each side of the larynx, follow laterally the direction of the tube, to which they adhere by very delicate fibres; pass over the gizzard, and unite their fibres on the crest of the sternum. This peculiarity of structure of the trachea, and the two ribband-like muscles, do not exist in the female bird. The figures, presented by Mr. Gould, although finely executed, are not so strikingly characteristic of the originals as in many of the preceding plates.

PLATE VI. presents figures, male and female, of the Buff-breasted

Sandpiper, *Tringa rufescens*,—le Tringa roussatre, *Fr.*,—excellent alike, in form and colouring. This elegant bird, discovered, in Louisiana, by Vieillot, has been observed only thrice within the limits of Europe,—twice in this country and once in France; and was first described as a British species by Mr. Yarrell in the 16th volume of the *Linnæan Transactions*. Of its habits and nidification, nothing is, at present, known.

PLATE VII. A noble figure of the Short-toed Eagle,—*Circæetus brachydactylus*,—l'Aigle jean de blanc, *Fr.*,—Falco terzo d'Aquila, *It.*,—Kurzzeziger Adler, *G.* This Eagle,—*F. gallicus* of Gmelin, and *leucopsis* of Bechstein,—*Aquila brachydactyla* and — *leucamphoma*, of other German writers,—has, as the specific designation indicates, *short toes*, the outer two united, at their base, by a web; the lateral and hind-toes nearly equal; nails short, and strongly curved. It has the wings of the Eagles and Buzzards, with the reticulated tarsi of the Ospreys; holds an intermediate place, in a philosophical System of Ornithology, between the genera *Haliaeetus*, *Pandion*, and *Buteo*: and is admirably described by Temminck, in his celebrated *Manuel*, p. 46. It inhabits the great pine-forests of the eastern portions of North Europe: occurs, occasionally, in Germany and Switzerland; rarely in France; never in Holland or the British islands. Its favourite food is lizards and serpents: in the absence of these, birds and poultry. In a nest built on the loftiest trees, the female deposits two or three eggs, of a lustrous-grey colour, without spots. The Plate represents a male bird in the adolescent state; when the flanks and thighs are transversely barred with brown.

PLATE VIII. Figures of the male and female Bimaculated Teal,—*Querquedula*—olim *Anas*—*glocitans*—admirably executed. This beautiful species, the largest, hitherto known, of the Teal genus, is described, by Pallas, as a native of Northern Siberia. Three instances only of its capture have occurred in Britain. It has been correctly figured by Pennant in his *British Zoology*. Of its habits, nidification, and anatomy of the trachea, Ornithology, at present, possesses no record. The English specific designation* of the bird is derived from *two* large brown *spots*, of an oblong figure, on the

* On what ground, has our late correspondent, S. D. W., while he somewhat capriciously substitutes *Crocca* as a generic appellation of the Teal, for *Querquedula*, neglected to adopt the precise and corresponding Latin term, *bimaculata*, for the species, in preference to the vague and objectionable *glocitans*?—P.

face and neck of the male. Mr. Gould believes that these markings vary in depth of colour, at different seasons.

PLATE IX. The Red-legged Partridge,—*Perdix rubra*,—le Perdrix rouge, *Fr.*,—Pernice commune, *It.*,—das rothe Feldhuhn, *G.* This beautiful species, with four others, two of which are extra-European, differ so widely, in the possession of a spur and the habit of perching upon trees, from our common Partridge, that we, even we, are disposed to approve of their removal to a distinct genus. To the genus thus constituted, the term *Rufipes* has been applied. A more characteristic designation, derived from the presence of the spur, might, peradventure, be concocted. The subject of the present plate, in our opinion, too large and rather harshly coloured, has long been naturalized in England under the name of the *Guernsey Partridge*. It is a native of the European continent, and the Channel-islands. In an autumnal visit lately paid, by us, to Guernsey,* we, however, saw nothing of this bird; and all our inquiries led to the inference that, if not utterly extinct, it must have become very rare, in that favoured isle. It is the *Rufipes picta*,—Guernsey Red-foot,—of modern Ornithologists.

PLATE X. Black-and-White Kingfisher,—*Alcedo rudis* (why not *melaleuca* ?). A native of Africa and Asia; but occasionally visiting the islands of the Grecian Archipelago. Feeds on fishes, and lays white eggs. Resembles, in general form and structure, our British species. Figures of male and female very finely delineated.

PLATE XI. Common Flamingo,—*Phaenicopterus ruber*,—le Flamant rouge, *Fr.*,—der rothe Flamingo, *G.* A strong doubt is expressed, by Temminck, as to the identity of the old-world and American species of this extraordinary bird. Should they prove, on farther examination, to be distinct, he proposes to apply to the former, the term, *Ph. antiquorum*, and retain, for the latter, its present specific designation, *ruber*.

These birds live on the sea-coast; and feed upon testaceous *Mollusca*, fish-spawn, and insects, for the capture of which, the possession of a curved beak and long and flexible neck admirably fits them. They congregate in large numbers, and breed in society. They construct, in marshes, an elevated and pyramidal nest of earth, hollowed

* We were much surprized at the paucity of birds observed by us, during a fortnight's sojourn in the beautiful island of Guernsey. The Osprey and the Kite were the only birds of prey, which presented themselves to our notice there: and even of the Water-birds, the individuals and the species were far less numerous than we had expected to find.—P.

out at the summit; on which they place themselves astride to perform the process of incubation; prevented, by the length of their legs, from sitting on the nest, in the ordinary fashion. The eggs are two in number, pure-white, and of an oblong figure.

There are several defects in the principal figure of the Flamingo, as delineated by Mr. Gould. The leg on which it stands is much too thick; the neck too short; and the bill certainly less curved than in the cabinet-specimens with which our eye is familiar. The structure of the latter organ is more correctly figured by the American Wilson, and even by Rennie, in his *Architecture of Birds*, than by Gould in this elaborate and finely-coloured engraving.

PLATE XII. Great Snipe,—*Scolopax major*,—Le Grande ou Double Bécassine, *Fr.*,—Beccacino maggiore, *It.*,—Mittelschnepfe, *G.* A bold and striking figure of the male bird, somewhat harshly coloured. The impropriety of the application of terms, indicative of size, for the specific designation of animals, or plants, is rendered very obvious in the present instance: for the Great Snipe, although the largest of the European, is actually surpassed in size, by two Asiatic, and one American species. The bird, however, is of solitary habits; and, consequently, may be distinguished by the epithet, *solitaria*, until a better specific designation can be devised. All terms, derived from the habits of animals, are only admissible into philosophical Zoology in the absence of others founded on some striking peculiarity of external structure or colouring.

PLATE XIII. The Solan Gannet,—*Sula bassana*,—le Fou blanc ou de Bassan, *Fr.*,—der Bassanische Pelikan, *G.*,—Jan van Gent, *D.* Than the two figures of the adult and young bird, here represented, nothing, more strikingly correct or beautiful, has ever been conceived or executed. The rocky and precipitous coasts of Scotland and the adjacent isles, as that of Ailsa, and the Bass rock, are selected as the principal habitation, and the breeding places, of this powerful bird,—*S. alba*, of Meyer,—*Pelecanus bassanus*, and Solan Goose of the older Ornithologists. Till the end of the fourth year, when the adult state is attained, the Gannet exhibits great variations of plumage. The female lays one white egg. Fishes taken by the act of plunging, constitute its food.

PLATE XIV. Of the Broad-billed Tringa,—*Tr. platyrhynchos*,—le Bécasseau platyrhinque, *Fr.*,—*Numenius pygmaeus*, and Pigmy Curlew, of Latham,—one exquisite figure is here given. Temminck describes it as inhabiting the marshes of North Europe and America. It passes, annually, southward along the eastern rivers of the Eu-

ropean continent; and is common on the shores of the Swiss lakes, particularly in spring. Food: insects and worms. History and habits unknown.

PLATE XV. The Calandra Lark,—*Alanda Calandra*,—l'Alouette Calandre, *Fr.*,—Kalander Lerche, *G.*,—forms, in figures of an adult and young bird, the subject of this plate. It inhabits North Africa and the southern regions of Europe. It closely resembles its congener, *A. Tartarica*, in size and figure; and our own favourite, *A. arvensis*, in habits. The nest, constructed, among grass, contains four or five eggs, of a clear-purple colour, marked with large ash-grey spots, and dark-brown specks. Food: insects, worms, and seeds.

PLATE XVI. A bold and masterly figure of the Brent Goose,—*Anser brenta*,—l'Oie cravant, *Fr.*,—*Anatra colombaccio*, *It.*,—Ringel-Gans, *G.*,—Rotgans, *D.* Much confusion has been introduced into ornithological writings, by an error of Linnæus in describing the true Bernicle as the male of the White-fronted Goose, *A. erythropus*; and regarding, as synonymous, *A. brenta* and *bernicla*, of the older naturalists. This error has, at length, been rectified, by Dr. Fleming, in his valuable *History of British Animals*; and the White-fronted (*Anas albifrons*, of Gmelin and Latham) Bernicle, and Brent Goose, are there properly arranged under the respective titles of *Anser erythropus*, *bernicla*, and *brenta*.

The Brent or Brand Goose is the smallest of the European species of *Anser*. It breeds in the arctic circle, during summer; the female laying from ten to twelve white eggs in a nest constructed of vegetable materials; and seeks, in autumn, the more temperate regions of Europe. During winter it inhabits, in large flocks, the bays and shores of our southern and eastern coasts; and is widely spread along the northern limits of the neighbouring continent. The trachea of the male bird becomes suddenly enlarged a little below the glottis. Resuming its ordinary diameter, the tube swells into a second dilatation about the region of the furculum. At that point, the rings suddenly contract, and form a very narrow cartilaginous tube; from whence issue the funnel-shaped bronchi, composed of solid and entire rings.

PLATE XVII. Temminck's Tringa,—*Tr. Temminckii*,—le Bécasseau Temmia, *Fr.*,—der Temminckshe Strandläufer, *G.* The smallest of the species of *Tringa*; so named, by Leisler, in honour of his friend, the celebrated Dutch ornithologist. It has frequently been confounded with *Tringa minuta*; but differs from its conge-

ner, in inferiority of size ; in the possession of shorter tarsi, of an olive-green colour ; in the absence of the red colouring of the upper surface ; and the preference which it evinces for inland creeks and muddy shores, instead of the shingly beach which constitutes the favourite resort of the latter. Its food consists of insects, worms, and *Mollusca* : and, although no authentic record of the fact has yet been obtained, Mr. Gould thinks it probable, from the frequent occurrence of the bird, in an immature state, in this country, that, like the Dunlin and others of the genus, it breeds in some of our more secluded and extensive marshes. The plate represents figures of the young and adult bird, executed with great taste, fidelity, and spirit.

PLATE XVIII. The Little Cormorant,—*Carbo pygmaeus*,—le Cormoran pygmée, *Fr.*,—is here very strikingly delineated. It is *Pelecanus pygmaeus*, of Pallas ; the Dwarf Shag, of Latham ; yet, by no means, as its specific designation would seem to imply, the smallest of its genus. It inhabits the eastern parts of Europe ; is very numerous in Asiatic Russia, and probably in Turkey. Food, and nidification, unknown.

PLATE XIX. Richard's Pipit,—*Anthus Richardi*,—le Pipit Richard, *Fr.*,—is here very cleverly represented ; but, in size, certainly larger than natural. In the general outline of the body, in the elongated figure of the posterior claw, and in the habit of frequently raising and depressing the tail, a striking affinity exists between the species of the genera *Anthus* and *Motacilla*, especially those belonging to that section of the latter to which Cuvier has applied the sub-generic designation, *Budytes*. The subject of the present plate is of somewhat rare occurrence in Europe. Mr. Gould believes that the northern and western regions of Africa are its native habitation. Food, and nidification, unknown.

PLATE XX. The present Part concludes with the exhibition of two figures, nobly drawn, and most delicately coloured, of the Glaucous Gull,—*Larus glaucus*,—le Goëland Burgermeister, *Fr.*,—Weischwingige Meve, die grosse Seemeve oder der Burgermeister, *G.*,—in the adult summer and the immature plumage. A native of the Arctic regions, it breeds on precipitous rocks. Of its eggs, the most contradictory descriptions have been published : some writers, as Gould, stating them to be of a pale purplish-grey colour, with spots of umber-brown ; others, as Temminck, believing them, from the report of travellers, to be greenish, and marked with six or eight black spots. The species is a common visitant of the British and other European coasts ; and feeds voraciously on carrion, the car-

cases and even excrements of the *Cetacea*, fishes, and the smaller marine birds.

EIGHTEENTH PART.

PLATE I. Presents two charming figures, male and female, of the Martin or Eave-Swallow,—*Hirundo urbica*—l'Hirondelle de Fenêtre, *Fr.*—Rondine commune, *It.*—die Hausschwalbe, *G.*—Boeren Zwaluw, *D.* The only defect which we can discover, is a somewhat unnatural elongation of the head of the male bird. That of the female, as it peers from "the canny nest," is admirably true to nature.

PLATE II. Equally accurate and pleasing representations of the Chimney-Swallow,—*Hirundo rustica*—l'Hirondelle de Cheminée, ou domestique, *Fr.*—Rondine domestica, *It.*—die Rauch-Schwalbe, *G.*—Huis Zwaluw, *D.*—in the adult and immature states. Few of our readers are probably aware that a common plant, the greater Celandine,—Zwaluw-kruid (Swallow-wort) of the Dutch,—derives its Greek and generic Latin designation *χελιδών*, and *Chelidonium*, from the circumstance of its flowering about the joyous period of the coming of the Swallow,—*ι χελιδών*.

PLATE III. The European Goatsucker,—*Caprimulgus Europæus*—l'Engoulevent ordinaire, *Fr.*—Succchia Capare, *ò* Nottola, *It.*—Tagschlafer, *G.*—Geiten-Melker, *D.* Than this curious and ill-fated bird, none has ever been more unjustly calumniated; none more unhappy in either its generic or trivial designations. For neither has it ever been convicted, on clear evidence, of defrauding the youngsters of the goat-family of their destined aliment; nor is it, as the specific name would naturally imply, the only European species of this foully-belied genus. With a view of rectifying the errors to which we have just adverted, divers scribes of high ornithological celebrity, have manfully exerted their well-known onomato-poietic talent: and the imposing terms, *Nyctichelidon Europæus*, and *Vociferator melolontha*, have been the felicitous results of the profound cogitations of a Rennie and a Wood. Now, if pigmies, such as we, may presume to offer an opinion on such grave and weighty matters, or question the dicta of the mighty in literature and science, we shall, at once, boldly affirm that neither of these appellations is altogether unobjectionable. The term, *Nyctichelidon*, or Night-swallow, is certainly far preferable, as a generic designation, to its obstreperous rival; but, for the reasons already assigned, the adjective, *Europæus* must be summarily discarded: and, on the other hand, the applicability of

the epithet, *melolontha* to a bird which preys as freely on lepidopterous and hymenopterous insects as on the cock-chaffer, it would require an apparatus of cerebral organs, far more finely constituted and fully developed than those in our possession, to discover. From the peculiarities of its external structure, mode of flight and capture of the animals which constitute its food, and its habits of crepuscular and nocturnal excursion in search of prey, the Night-jar evidently occupies an intermediate situation between the nocturnal Division of the Owl-, and the Swallow-Family. A due consideration of these circumstances will probably lead to the adoption of a more appropriate specific name than those we have so daringly denounced. Till then, the terms, *Nyctichelidon vulgaris*, may be conveniently employed. The eggs, two in number, of an oblong figure, and white colour regularly marbled with brown and ash-grey spots, are deposited, without nest, at the foot, or, sometimes, in the holes, of trees. The close resemblance which exists between the plumage of the Night-Swallow, and young cuckoo, has been the source of divers erroneous statements respecting the habits of the latter bird. For an account of these, we refer the reader to page 121, of Rennie's edition of the *Ornithological Dictionary*, of Montagu.

PLATE IV. A delightful representation of Tengmalm's Owl,—*Noctua*—olim *Strix*—*Tengmalmi* vel *funerea*—Chouette Tengmalm, Fr.,—Rauhfüssiger Kauz, G. This interesting little Night-owl, only of late years recognized as a British species, may be distinguished from *N. passerina*, with which it has frequently been confounded, by the more elongated figure of the body, the greater proportionate length of the wings and tail, and shortness of the *tarsi*, which, with the toes, are *thickly feathered*. It is widely distributed through the northern and eastern regions of the European continent, and the wooded districts of North America. A good description, and neat but not very characteristic figure of the bird, are given in the second volume of *Fauna Boreali-Americana*. Few specimens of it have hitherto been observed in Britain. As the two nearly allied species, which we have just been contrasting, are at once distinguishable by the *presence*, or *absence*, of *down* on the *tarsi and toes*, we trust that all "good and true" Ornithologists will, henceforth, agree to respectively designate them by the characteristic terms of *feather-foot*, and *bare-foot*, Night-Owl, *Noctua dasypa*, and *Noctua nudipes*.

PLATE V. The Common Tern—or Sea-Swallow,—*Sterna hirundo*,—l'Hirondelle-de-Mer Pierre Garin, Fr.,—Gemeine oder Rothfüssige Meerschwalbe, G.,—Zee-Zwaluw, D. Two figures of the

adult in the summer- and winter-plumage; very correctly and delicately executed.

PLATE VI. Of Marmora's Warbler,—*Curruca sarda*,—le Bec-fin Sarde, *Fr.*,—a male and female are here exquisitely delineated. Closely allied, in plumage and the naked circle which surrounds the eye, to *C.*—*Sylvia*—*melanocephala*, it may be distinguished by the more weak and slender structure of the bill; by the mere edging with white, of the exterior tail-feathers,—whereas, in *C. melanocephala*, all the exterior barb, and the extremity of the two first feathers are white;—and by the less deep and decided black colouring of the head. This species, a native of Sardinia, was first described by the Chevalier Marmora, in August, 1819, in the *Annals of the Academy of Turin*. It inhabits wild and uncultivated districts; and is exclusively insectivorous. Nidification unknown.

PLATE VII. A splendid figure of the Short-eared Owl,—*Otus*—*olim Strix*—*brachyotos*,—Hibou brachiote, *Fr.*,—Kurzöhrige Ohreule, *G.* The synonyms of this "creature of many names," are perplexingly numerous. It is the *Strix accipitrina*, *arctica*, *brachyura*, *palustris*, *stridula*, *tripennis*, and *ulula*, of sundry writers; *Ulula brachyotos*, of MacGillivray,*—by whom a most minute and accurate description has been given, of its structure, characters, and habits;—and *Asio ulula*, of Mr. Neville Wood. We learn, on the authority of Sir W. Jardine,† that this species breeds in Scotland; that the nest is formed on the ground among heath, and its bottom scraped until the fresh earth appears. On this the eggs, five in number, are deposited, without lining or cover of any description.

PLATE VIII. The Cetti Warbler,—le Bec-fin bouscarle, ou Cetti, *Fr.* A native of Sardinia and Italy; but never yet captured, as Temminck supposes, in England. Non-migratory and insectivorous. Nearly allied, in figure and action, to the true Wrens; in other characters, to the Reedlings: and hence provisionally ranged, by Mr. Gould, among the *Salicariæ*. Two exquisite figures of the adult bird.

PLATE IX. Eye has rarely gazed on a more strikingly beautiful production of the pencil, than the figure here exhibited, of the Rough-legged Buzzard,—*Buteo*—*olim Falco*—*lagopus*,—la Buse pattuë, *Fr.*,—Rauhfüssiger Busard, *G.* From its congener, the Common Buzzard, which it, in other respects, very closely resembles, this

* See *Descriptions of the Rapacious Birds of Great Britain*, p. 412.

† See his edition of *Wilson's American Ornithology*, vol. ii, p. 64.

beautiful bird, may, at once, be distinguished by its plumed tarsi. It is a native of the northern regions of Europe and America, and merely an occasional visitant of the British islands. It preys on the smaller *Mammifera*, birds, snakes, and frogs; and is said, by Temminck, to construct its nest on lofty trees. The eggs, four in number, are of a white colour shaded with reddish-brown.

PLATE X. An equally bold and spirited figure of the Western Duck,—*Fuligula dispar*. This rare bird, a native of the northern regions of Asia and America, has been introduced into the British Fauna, in consequence of the capture of one specimen near Yarmouth, Norfolk, in February, 1830. Not having seen the specimen in question, and consequently incapable of accurately determining the situation which it ought to occupy in the Duck-Family, Mr. Gould has placed it provisionally among the *Fuligulae*: although, from the general contour of the bird, the disposition of its colours, and the curved form of the tertials, it would seem more properly to belong to the genus *Somateria*.

PLATE XI. Two charming figures, male and female, of the Common or Brown Linnet,—*Linaria*—olim *Fringilla*—*cannabina*,—Gros-Bec Linotte, *Fr.*,—Montanello maggiore, *It.*,—Bluthänfling, *G.*,—Vlasvink, *D.* The error, committed by Bewick and other ornithologists, in describing two distinct species of this bird under the titles of the Brown Linnet and the Greater Redpole, has been most ably exposed and rectified by Mr. Selby.* This mistake had, doubtless, arisen from the circumstance of the male bird losing, in winter, the bright-red colouring of the forehead and breast, which characterizes, in a state of freedom, his summer-plumage, and not always acquiring, in confinement, that beautiful tint on the return of summer. For the knowledge of the latter fact, we are indebted, also, to Mr. Selby.

PLATE XII. A bold portrait, not, however, drawn or coloured in Mr. Gould's happiest style, of the Carrion Crow,—*Corvus corone*,—la Corneille noire ou Corbine, *Fr.*,—Corvo maggiore, *It.*,—der Rabe, die Krähe, *G.* This bird, so common in Western Europe, is seldom seen in Austria or Hungary. Temminck, moreover, states that in those countries, and those only, where the species is rare, a mixed progeny is sometimes produced by its alliance with the Hooded Crow, *Corvus cornix*.

PLATE XIII. Of the elegant and finely executed subject before

* *Illustrations of British Ornithology*, v. 1, p. 315.

us, the Moustache Tern,—*Viralva*—olim *Sterna*—*leucopareia*,—l'Hirondelle-de-mer moustac, *Fr.*,—the leading characters, as traced by Temminck, are : Bill and feet lake-red. Middle toe with its claw much longer than the tarsus. Tail slightly forked, and surpassed, in length, by the wings (at least) an inch and half. This new and beautiful Tern was discovered, by Natterer of Vienna, in the south of Hungary. Temminck has, also, found it in the marshes near Capo d'Istria, and on the coasts of Dalmatia : and, on one occasion, three individuals were killed on the coast of Picardy. It feeds on marsh-insects and aquatic worms. Propagation unknown. Of the soundness of the principles on which the species, now constituting the genus *Viralva*, have been separated from *Sterna*, we are, at present, unable to offer an opinion. The specific name of the subject before us, is derived from the pure-white colour of the feathers investing the regions of the face and ear.

PLATE XIV. exhibits delightful figures of two species of Warbler, the Moustached,—*Salicaria melanopogon*,—la Bec-fin à moustaches noires, *Fr.* ;—and the Aquatic,—*S. aquatica*,—le B. aquatique, *Fr.*,—Rohrsanger, Binsen Sanger, *G.* They are, both, natives of Italy and South Europe, and insectivorous. The habits of the first are little known. The nest of the latter, constructed among the stems of aquatic plants, contains four or five eggs, of a yellowish-ash colour, marked with greyish-olive specks.

PLATE XV. The Common Bittern,—*Botaurus*—olim *Ardea*—*stellaris*,—Héron grand butor, *Fr.*,—Scarza stellare, *It.*,—Grosse Rohrdommel, *G.*,—Roode Roerdomp, *D.* Of this well-known and beautiful bird, Mr. Gould's figure, although rather finely coloured, is unusually defective in the outline. The head, neck and legs, are much too large for the body of the animal ; and the fierce and noble attitude which it frequently assumes, has been woefully lost sight of. The Bittern is of shy and solitary habits : its domicile, the reedy marsh ; and evening the hour of its predatory excursions. Its food consists of the smaller *Mammifera*, lizards, frogs, fishes, *Mollusca*, leeches, and aquatic insects. The nest, constructed of sticks and reeds, among the thickest herbage at the water's edge, contains four or five eggs of "an uniform pale brown,"*—or, according to Tem-

* We are somewhat surprized at this assertion of Mr. Gould. The few Bittern's eggs which we have had an opportunity of inspecting, have invariably been, as Selby correctly describes them, of a "pale asparagus-green colour." We regret our inability to appeal to the authority of Hewitson, on

minck, clear greenish colour. There are, in our opinion, few more fair and interesting birds than the "booming Bittern."

PLATE XVI. A bold, massive, and spirited representation of the Grey-Lag Wild Goose,—*Anser ferus vel palustris*,—olim *Anas anser (ferus)*,—l'Oie cendrée ou première, *Fr.*,—Oca paglietane, *It.*,—Wilde gemeine oder graue Gans, *G.*,—the undoubted original of our common domestic species. Formerly a permanent inhabitant of this island, and breeding, in large numbers, in the fenny districts, this valuable bird has been driven from its haunts by the progress of cultivation; and now rarely occurs, even as a winter-visitant, among us. The place which it once occupied, appears to have been filled up by another species, *Anser segetum*. The extensive marshy districts of the more temperate regions of Europe constitute its principal habitation. The nest, constructed of vegetable materials, and placed among rushes, contains from six to twelve eggs, of a sullied-white colour.

PLATE XVII. A naturally drawn and exquisitely coloured figure of the Thrush Nightingale,—*Philomela turdoides*,—la Bec-fin Philomèle, *Fr.*,—Grosse Grasmücke, der Sprosser, *G.* This species,—*Sylvia Philomela*, *Luscinia*, et *Motacilla Lusc. major*, of preceding ornithologists,—has been very ably described by Mr. Blythe; and is said to connect the *Philomela* with certain species of the *Turdus* genus. It is distinguished from the common Nightingale by the greater volume of the head, thickness of the beak, and darker and deeper colouring of the plumage. It is, altogether, a larger bird; surpassing in loudness, but inferior in delicacy and variety, of song. It is a native of various parts of Germany; more abundant than the common species, in Hungary, Austria, and Poland: rarely visits France; unknown in Holland and the British islands. Its food consists of worms, insects, and berries. The nest, built in small thickets, or low and damp situations, contains brown-olive eggs stained with deep-brown, and larger than those of our British Nightingale.

PLATE XVIII. Two exquisite figures of the Dunlin or Purre,—*Tringa variabilis*,—le Bécasseau brunette ou variable, *Fr.*,—der Alpen oder veränderliche Strandläufer, *G.*,—representing two adult birds in the summer- and winter-plumage. From the striking variations of plumage exhibited by this bird, according to age and season, it has been described, by divers systematic writers, as belonging to several different genera and species. An inexperienced observer

this point: in the Numbers of his admirable *British Oology*, which we possess, the egg of the Bittern has not been figured.

would not identify individuals, in their summer- and winter-dress, as birds of the same species. Food: worms, insects, the smaller *Crustacea* and *Mollusca*, obtained by following the ebb-tide. Nest: a mere depression in the ground, lined with a few straws or withered grasses. Eggs: three or four, of large size, greenish-grey, spotted with reddish-brown.

PLATE XIX. A nicely-coloured, but not very spirited, representation of the Spotted Flycatcher,—*Muscicapa grisola*,—le Gobe-mouche gris, *Fr.*,—Gefleckter Fliegenfanger, *G.* A summer-visitant of Britain; insectivorous. Nest constructed of moss and small twigs, lined with hair and feathers, in the branches, or decayed holes, of trees, on the beams or rafters of out-buildings. Eggs: four or five, greyish-white, with reddish-brown spots of a deeper hue towards the obtuse extremity.

PLATE XX. A fine and delicately-coloured figure of the Caspian Tern,—*Sterna Caspia*,—l'Hirondelle-de-mer Tschegrava, *Fr.*,—*Sterna maggiore*, *It.*,—Grosse oder Caspische Meerschwalbe, *G.*,—terminates this Part. Dispersed over the northern shores of Africa, the east of Asia, and all the more temperate portion of Europe, and preferring inland seas, as the Mediterranean, Black, and Caspian, it is an occasional, yet rare, visitant of the British coasts. Food: fishes, *Mollusca* and *Crustacea*. Nest: a mere hollow, scraped in the sand or shingle. Eggs: two or three, of a greyish-green colour, sprinkled with large brown and deep-black spots. As distinguished from the other Terns by the relatively larger size of the bill, the specific designation, *Megarhynchos* (*Gros-schnablige*, *G.*), applied by Meyer and Bechstein, is peculiarly applicable to this noble species.

This Analysis will be continued in our next Number.

P.

*Paradise-street, Birmingham,
December, 1838.*

PROCEEDINGS OF METROPOLITAN SOCIETIES.

LINNÆAN SOCIETY.

NOVEMBER 6th.—The meetings of this society for the present session were resumed on this day. Numerous donations were announced as having been made during the recess, the principal of which were an extensive collection of dried plants from Demarara, presented by Mr. Schomburgk, and about twelve thousand specimens of dried plants, also from South America, together with a collection of books, bequeathed by the late Mr. Winch, of Newcastle. A note was read, from Jonathan Couch, Esq., of a specimen of Wilson's Petrel (*Thalassidroma Wilsonii*) having been found in a field near Polpero, Cornwall, in August last. This species of Storm Petrel had long previously been suspected to occur upon the western coasts of Britain; and Mr. Audubon had already obtained specimens of it within a day's sail of Iceland: it is the *Storm Petrel* described in Wilson's *Ornithology*. There were also read some interesting observations "On the cause of Ergot," by Mr. Smith, A.L.S. The author considers the Ergot to be a morbid growth of the albumen, resulting from the attacks of a minute parasitic fungus, which consists of oblong transparent cells, resembling the sporules of other fungi, and either free or united together in the form of articulated filaments, in which state they constitute the crust of the Ergot. The anthers, as well as the ovarium, are subject to the attacks of this minute parasite; and Mr. Smith supplied a list of a number of grasses which he had also observed to be occasionally affected by it.

NOVEMBER 20th.—A number of drawings of the fishes of the Red Sea were exhibited by Capt. Meadows Taylor. Professor Doo then read a description of a new genus of plants from South Africa, belonging to the natural family *Bignonaceæ*: after which a communication was read, from Dr. Shotaky, "On a new species of *Lepidosperma*," nearly allied to the *L. elatior* of Labillardière, and which was discovered by the author in the thick jungles which cover part of Tasman's Peninsula. The sharp edges of its long and slender leaves, which are from ten to fifteen and even twenty feet in length, were stated to inflict severe wounds on those who happen to pass through the places where this plant grows. Several paintings were exhibited, accurately representing the general aspect of vegetation in the above-named peninsula and New South Wales.

ZOOLOGICAL SOCIETY.

OCTOBER 9th.—The first portion of an elaborate paper on the osteology of the *Marsupiala* was read by Professor Owen, treating

exclusively on the conformation of the cranium. Several additional indications of the inferiority of these animals to other mammalia were pointed out; and it was noticed, for the first time, that the sutures of the skull do not become united with age, as happens with the rest of the class. A new genus of this group was characterized under the name of *Thalacomys*, founded on the *Perameles lagotis*, (Reid), all the incisor teeth of which are placed contiguously. In treating of the maxillary bones, Professor Owen took occasion to allude to the celebrated Stonefield fossils, and to the opinions recently put forth respecting them by Professor de Blainville. He had examined four specimens of rami of the lower jaw, whereas the eminent French zoologist was acquainted only with the cast or model; and did not hesitate to pronounce them to have belonged to marsupial mammalia, from the circumstance of the rami of the jaw consisting of only a single bone; also from the form of the inferior condyle; and from the fact of the molar teeth being rooted in their sockets by two distinct fangs. Mr. Martin then called the attention of the meeting to the fact, not previously noticed, of the last inferior molar of the two Mangaluys, or dusky-coloured white-eyed Monkeys (*Cercopithecus æthiops* and *fuliginosus*, Auct.), possessing a fifth tubercle, as in the *Macaci*, *Inui*, *Cynocephali*, and also the *Sennopitheci*, and *Colobi*, whereas the other species of *Cercopithecus*, as was well known, have only four tubercles to that tooth, as in man and the three genera of Apes. It was remarkable, also, that the facial angle of those two species was greater than in any other *Cercopitheci*, a further approximation to the Macaquo; and Mr. Martin concluded by proposing that the term *Cercocebus*, applied by the late Mr. Bennett to several of the larger *Cercopitheci*, which, however, presented no absolute distinguishing character from the smaller ones, should be restricted to the two animals in question. In the discussion which followed, Mr. Blyth remarked another distinction observable in the two Mangaluy Monkeys, which, though of little consequence, he deemed to be still worthy of mention: it was, that whereas all the *Cercopitheci*, as now limited, have the hairs on the upper parts grizzled or annulated with two colours, the same was not the case with the *Cercocebi*. Professor Owen then read a letter which he had received from Dr. Ouley, announcing the presence of a small but distinct *ligamentum teres* in the Coypu (*Myopotamus coypus*), which had been recently asserted not to exist.

OCTOBER 23rd.—A letter was read by the secretary from M. Julian Desjardins, the secretary of the Natural History Society of the Mauritius, announcing that he would embark for England on the 1st of January next, with extensive natural history collections, which were partly intended for the museum of the Zoological Society. Another was also read from Col. Campbell, dated Alexandria, stating that he could succeed in attaining no additional information respecting the white African Elephants, which he had hoped to have forwarded. A third from Lieut. Col. Dogherty, the governor of Sierra Leone, who remarked that he shortly expected to obtain

and send a male and female Chimpanzee, which were numerous in the interior ; but that, on account of the superstitious feeling which the inhabitants entertained towards the Hippopotamus, he had reason to fear that his endeavours would prove unsuccessful to transmit a living specimen of that animal, which was also of common occurrence. Mr. Waterhouse then exhibited specimens and numerous crania of two species of *Galæopithecus*, which he was unaware had previously been described, though Professor Temminck appears to have alluded to them in his statement that two species existed of this genus, which were well characterized by osteological distinctions. The majority of authors, following M. Geoffroy, had denoted three species, distinguished by colour only, which, in both of those now exhibited, was extremely variable, and consequently of no value whatever as a means of discrimination. He proposed to name them *G. Temminckii* and *G. Phillipinensis*. The former was of superior linear dimensions, but with smaller hands, and also ears : its teeth were separated by intervals, and the parietal ridges of the cranium were widely apart. The latter was a stronger-formed animal, the teeth of which were much stouter and more approximated, and the parietal ridges almost contiguous, thus allowing more extended space for the muscles which moved the jaw ; its muzzle also was more obtuse and rounded, and the conformation of the lower jaw strikingly different. Mr. Blyth next read a paper on the dental system of the *Lemuridæ*, in which he showed that the reputed outer pair of lower incisors of that group of animals were the representatives of the inferior canines of other *Quadrumana*, no member of that order possessing more than four incisive teeth to either jaw. This might easily be seen by opposing the successive teeth of both jaws, beginning with the most hindward ; or it might be ascertained by what was asserted to be an universal law throughout the class, that the inferior canines closed or locked outside or before the upper ones : the first false molar, in the Lemurs, assuming the form of a canine, as happens in some other instances. In the genera *Tarsius* and *Nycticebus*, it was stated that the true inferior canine assumed more of its ordinary form and dimensions ; while in *microcebus*, and the nearly allied *Cheirogaleus* (*Lichanotus* of Gray), the first false molar scarcely differed from the next. In *Galæopithecus* the superior canines are altogether wanting ; and this curious genus further differs from all other *Quadrumana* in the incompleteness of its bony orbits. It has four incisors to each jaw, the medial of which are separated by a very wide interval ; this interval is lessened, in the majority of *Lemuridæ*, in proportion as the inferior canines approximate, the latter being directed horizontally forwards, like the intervening incisors, which, in consequence of the approximation of the canines, are extremely narrow or compressed, the lower incisors and canines together being admitted within the interspace of the upper jaw. In *Propithecus* of Mr. Bennett, and the Indris (*Lichanotus*), the inferior canines are so approximate that one pair of the lower incisors is necessarily sacrificed, which the

author regarded as an approach to the rodent character of *Cheiromys*; in which remarkable genus the incisors have altogether disappeared, the canines of both jaws occupying their site, precisely as in the true *Rodentia*; wherein also those of the upper jaw pass through the intermaxillary bones. Mr. Blyth suspected, however, that the rodent teeth of *Cheiromys* did not possess persistent formative pulps, as in the order *Rodentia*, no other instance occurring of continuously growing teeth throughout the great series of *Primates* and *Feræ* of Linnæus. The same gentleman next read some observations on the *Plantigrada* of Cuvier, which he showed to consist of one natural group and a portion of another, which comprised the rest of the *Carnivora* that are destitute of a cæcum. The true *Plantigrada*, which place the entire sole upon the ground in walking, were stated to be comparatively few in number; and they were all further distinguished by possessing two tuberculous molars posterior to the carnivorous or cutting grinder of each jaw. The various species, with the exception of the two largest Bears, are all arboreal; and such of them as inhabit northern climates become torpid in winter, which is not the case with any of the others, so far as known. The genera *Ursus*, *Ailurus*, *Procyon*, *Nasua*, *Ictides*, and *Cerculeptis*, were referred to this first division. The rest were stated to be only semi-plantigrade, none of them bringing the heel quite to the ground; and they have only one tuberculous molar, which varies greatly in extent of surface: all of them diffuse, when irritated, a powerful odour, which in some is intolerably fetid. This group sub-divides into two principal sections; that of the Badgers, Ratsels, Skunks, &c., which have thick and heavy bodies and stouter limbs, generally well-adapted for burrowing; and that of the Weasels, Martens, &c., with long vermiform bodies, which again sub-divides into the Weasel and Otter sub-sections. None of the Badger section, it was asserted, the members of which have been generally approximated to the Bears, ever climb trees like the latter. Respecting the *plantigrade* character, Mr. Blyth observed that it appears to have been not a little misunderstood, the remark of Cuvier, that it was indicated by the degree of bareness of the sole, having apparently misled several naturalists; for even in the Polar Bear, and the Pander (*Ailurus*), the soles are completely covered with hair. In the Martens, at the head of which genus he placed the *Ursus gulo*, Lin. (*Gulo arcticus*, Auct.), which, excepting in size and massiveness, he could not perceive differed at all from other Martens, surprising differences might be observed in the modification of the foot, from *M. flavigula* of the Himalayas, which has the toes joined to their extremities, and the sole bare, as in the Badgers, to *M. Zibellina*, the Sable, the toes of which are as separate as in a Weasel, and the foot hairy underneath. Mr. Blyth lastly exhibited the head of a half-Hereford half-Durham ox, of most gigantic dimensions, the horns of which exceeded four feet round at the base. It appeared, however, to be a monstrous production, the head, which was covered by its skin, seeming to be double, as indicated by the

existence of two radiating centres of hair on its enormous forehead. The body was stated to have offered nothing remarkable, either in size or external structure. Professor Owen then concluded his paper on the osteology of the *Marsupiala*, describing the remainder of the skeleton ; and he observed that he found it necessary to institute the minute researches and enter into the detailed descriptions which he had done, in order to enable others as well as qualify himself to undertake the determination of fossil marsupial remains, some valuable specimens of which had lately been entrusted to his care by the enterprising Australian traveller, Major Mitchell.

NOVEMBER 13th.—Mr. Waterhouse read a paper on the marsupial genus *Petaurus*, which he considered divisible into three marked sub-genera, distinguished by differences in their dentition. M. Desmaret had already separated the Pygmy Petaurist (*Didelphis pygmaeus*, Shaw), under the name *Acrobatas*, which he accordingly adopted : this sub-division possesses thirty-six teeth in all, the peculiarities of which are stated in the *Regne Animal*. The Great Petaurist (*P. loquax*, Desm. ; *Didelphis petaurus*, Shaw) formed the type of the second sub genus, comprising several species, to which the appellation *Petaurus* was proposed to be restricted : the members of this group have in all thirty-four teeth. Lastly, the Sciurine Petaurist (*P. sciurea*), with three or four others, were brought together under the designation *Belidea*, possessing forty teeth, which exhibit considerable modification when compared with those of the preceding : it had also a perfect bony palate, which was not the case with the others. A new species was described under the denomination of *Belidea breviceps*. Mr. Waterhouse then proceeded to offer some remarks on the American Badger of authors (*Nules Labradoriens*, Richardson), of which he exhibited some crania, together with specimens of that of the common European Badger. The differences were so very considerable that he could not hesitate about the propriety of making a separate minimum sub-division of the American animal, for which he proposed the appellation *Taxidea*. In the European Badger, the carnivorous grinder is small, and the tubercular exceedingly developed, the carnivorous character of dentition being reduced to its minimum in this species, of all the *Carnivora* which possess but one tuberculous molar. In the American Badger the carnivorous grinder is increased, and the tubercular reduced to an equality of size ; the false molars, also, are more trenchant ; the lower jaw is not locked in its socket, as in the true Badgers ; and, finally, the skull is very differently formed, being widest posteriorly, where it is abruptly truncated, as in the majority of eminently fossorial mammalia : its anterior claws are likewise much more powerful than in the European Badger, altogether indicating an animal which burrows with still greater facility, and which subsists on a more carnivorous regimen. Professor Owen then described the cranium and dental characters of the Koala (*Phascolaretos*), from specimens of three different ages, the dentition of this genus having never been before completely de-

scribed. There are five molars on each side of both jaws, each with four tubercles, excepting the first; and the general character is nearly the same as in the Phalangers, to which this genus is very intimately allied.

NOVEMBER 27th.—Dr. Horsfield exhibited a large undetermined *Macacus*, which, together with some Squirrels and other mammalia, and an extensive assortment of birds, had been forwarded to the India House Museum, by Captain M'Cleland, from Upper Assam, where they had been collected by the gentleman sent by the East India Company to explore the tea districts. Mr. Ogilby next exhibited some specimens of a Pika (*Lagomys*) procured from a considerable altitude on the Himalayas, the other species of this genus, with the exception of that of North America, inhabiting the plains of Tartary and steppes of Siberia, where the hoards of dried grass piled over the entrance of their burrows supplied provender for the horses of those who traversed that bleak region in winter. Col. Sykes then exhibited forty-six exquisite coloured drawings of the fishes of the Deccan, no less than forty-two of which proved to represent new species: by far the greater number of them were referable to the division *Malacopterygii*, so numerous also in the inland waters of this part of the world: there were a few, however, of what had hitherto been regarded as exclusively marine forms, allied to the Pipe-fish (*Syngnathus*); and a single species of Eel, beautifully marked and coloured. The whole had been taken from recent specimens immediately after their capture, the gallant colonel having constantly employed an artist, under his immediate eye, when encamped on the plains of Indostan.

DECEMBER 11th.—Several communications were read from different correspondents, announcing presents of various kinds to the menagerie and museum; the principal of which were an enormous wasp's nest, sent by the governor of Ceylon, and which had been constructed beneath the shelter of a talipot leaf, at the height of seventy feet from the ground; and a collection of fossil tertiary shells from the vicinity of Turin. Dr. Horsfield described an immense number of birds which had been forwarded to the India House Museum, by Captain M'Cleland, from Assam, and exhibited coloured drawings of all the species. Some living European Tree-frogs (*Hyla viridis*) also were exhibited, some of which had lived three years in this country. The greater portion of the evening was consumed in the reading of Dr. Horsfield's communication; and the immense wasp's nest before mentioned, which was entirely similar in construction to the pendant nests of that genus common in some districts of Britain, lay on the table for inspection.

ENTOMOLOGICAL SOCIETY.

NOVEMBER 5th.—This was a special meeting, summoned for the purpose of taking into consideration various proposed alterations in the bye-laws, relating to the admission of ordinary and corresponding members, which led to considerable discussion. Rules having been at length adopted, the meeting proceeded to the ordinary business of the night, announcing donations, and reading the correspondence. Mr. W. Stephens exhibited some living apterous insects from Java, and also a fine specimen of *Cotocala fuaseni*, that had been recently captured near Arundel. The President, J. F. Stephens, Esq., in a speech from the chair, announced and delivered to Mr. G. Newport the prize of ten guineas, for his essay on the natural history and anatomy of the *Athalia centrifolia*, one of the insects which destroy the turnip. Mr. Holme, of Corpus Christi College, Oxford, communicated a notice of recent entomological captures. Lastly, some observations were read by R. A. Ashton, Esq., upon the mode of construction of the winter cocoon of the Goat-moth, and upon the casting of the coats of the internal organs by caterpillars during moulting.

BOTANICAL SOCIETY.

NOVEMBER 2nd.—A paper "On the Botany of Coleham, Kent," was first read by Dr. Bossey. It enumerated, among other rare plants found in that neighbourhood, *Althæa hirsuta*, *Salvia pratensis*, and *Brachypodium pinnatum*. Dr. Bossey thought that the habitats of the *Althæa* and *Salvia* had not previously been correctly given. He commented upon the importance of botanists recording, and correctly defining, the habitats of plants, as much difficulty is experienced in the procuring of rare specimens in consequence of such omission. Mr. D. Cooper, the Curator, then made observations on various specimens upon the table, which had been presented by different members.

NOVEMBER 16th.—The fruit, bark, and liber, of *Bertholetia excelsa*, were exhibited, having been presented by Mr. Schomburgk. The only paper read was by W. M. Chatterly, Esq., "On the importance of Botanical Statistics," illustrated by the order *Conifera*. The importation, excise, consumption, &c., of the Pine tribe, were severally stated, and a variety of other interesting details were entered into.

NOVEMBER 29th.—Anniversary meeting. The Report of the Council stated that the number of members elected during the past year was forty-seven; of British plants received, 18,592 specimens, including 1,050 species; of foreign plants, about 10,000 specimens, including 4,000 presented by the Botanical Society of Edinburgh.

(from whom a valuable collection of British plants had also been received), and others. The Council had appointed local secretaries in different parts of the kingdom; also at the Cape of Good Hope and South Australia; and had made arrangements with the Society of Edinburgh for an annual exchange of plants, which would be an advantage to the members of both societies. The Report was carried unanimously. By the ballot for officers for the ensuing year, J. E. Gray, Esq., F.R.S., was re-elected President, who thereupon appointed J. G. Children, Esq. V.P.R.S. and Dr. Macreight, F.L.S. Vice-presidents. The President's address was congratulatory, pointed out the advantages derived from an interchange of plants, drew attention to the increase of the society's herbarium from the excursions made in the vicinity of London, and the benefits accruing to each member therefrom; and hoped for continued exertions in the same way, as a considerable number of rarities had thus been already collected.

GEOLOGICAL SOCIETY.

NOVEMBER 5th.—The first meeting of this society for the present season was held on this day. Professor Owen read a paper on some fossil remains of *Pachydermata*, obtained from the fresh-water deposits of the Isle of Wight, and which were referable to the extinct genera *Charopotamus*, *Anoplotherium*, and *Palaotherium*, the first of which had not previously been ascertained to occur in that locality. The discoveries of Mr. Allen and Mr. Pratt had long since proved the existence of both the others in the quarries of Bin-stead; but the collection which had recently been made by Mr. Fox enabled the author to determine more fully several of the species which had been first ascertained by Cuvier in the gypsum quarries of Paris; and to show also that the *Charopotamus*, which was most nearly allied to the Peccary (*Dicotyles*) among existing animals, another of the extinct generic forms which had been reconstructed by the illustrious French naturalist from fragments found in the celebrated ossiferous deposit of Montmartre, occurred likewise in the contemporaneous older tertiary beds of this country. The portion of this curious animal described by Mr. Owen consists of a nearly perfect right ramus of the lower jaw, nearly nine inches in length, and containing three tuberculated true molars, and two conical anterior or false molars, with the socket of a third, and part of what was deemed to be the tusk or canine. The last true molar, which was unknown to Cuvier, presents the same structure as the corresponding tooth of the Peccary, as is likewise the case with the two others: but the false molars have each two fangs, and are relatively larger than in the Hog tribe. In the outline of the inferior border of the jaw, the *Charopotamus* also resembled the Peccary; but in the size of the coronoid process, and prolongation back-

wards of the inferior angle of the jaw, this animal exceeded any other known ungulated quadruped, and approximated the *Carnivora*; in reference to which Professor Owen drew attention to the carnivorous propensity of the common Hog, which, of all existing genera of *Pachydermata*, offered decidedly the nearest approach to the carnivorous type of structure. The author farther added, as a circumstance not devoid of interest, that the Peccaries should now be confined, in their geographic range, to South America, where the Tapir, the nearest living analogue of the *Palæotherium* and *Anoplotherium*, still exists; and concluded by referring the other specimens of Mr. Fox's collection to the species *Anoplotherium commune* and *A. secundarium*, and *Palæotherium medium*, *P. arassum*, *P. minus*, and *P. curtum*.

Some remarks were then offered on a jaw found at Binstead in 1830, and considered to have been allied to the genus *Moschus* among the *Ruminantia*, but which Professor Owen showed to approximate rather to the extinct genus *Dichobune* of Cuvier, though in some respects the fossil also resembled the existing *Moschus moschiferus*: its characters were elaborately described.

Dr. Mitchell then read a paper "On the deposit of Blue and Brown Clay so extensively distributed over the eastern counties, and characterized by containing rounded nodules of chalk, and masses of various other rocks and fossils from nearly every secondary formation in England." The chief localities were enumerated near which the deposit was stated to occur, as also the principal places where the nodules of the several secondary rocks, with their fossils, were found to be enclosed; and the paper concluded with some observations on the probable direction of the currents by which this important geological deposit was accumulated.

NOVEMBER 21st.—The greater portion of this evening was taken up by a very elaborate paper of Professor Owen, on two jaws of the fossil *Thylacotherium prevostii* (Valenciennes), from Stonesfield.—The nature of these remarkable fossils has recently excited so much interest, from the importance of the generalizations resulting from their determination, that it is, perhaps, needless to premise that the discussions which have been lately held respecting them at the French Academy, at the meeting of German naturalists last autumn, and since in this country, originated in a memoir published by the eminent successor in the chair of Cuvier, Professor de Blainville, the object of which was to show that the animals in question, the remains of which are imbedded in the oolitic secondary formation, did *not* pertain to the class *Mammalia*, to the marsupial division of which they had been referred by Cuvier and others. M. Valenciennes had already published an attempted refutation of the bold and plausibly supported views of his illustrious colleague; but as the lapse of ages was so immense from the period when these fossils were entombed, to that of the tertiary formation, wherein the remains of mammiferous animals first re-appeared, this circumstance alone led many naturalists and palæontologists to regard with much

suspicion the identification, as portions of marsupial quadrupeds, of the very ancient secondary organic remains under consideration.—Mr. Owen commenced by passing a just eulogy on the skill and discrimination uniformly evinced by Cuvier in forming a judgment on the affinities of an external animal, from inspection of a fossil fragment; and proceeded to examine in succession the various objections which had been raised by Professor de Blainville, laying particular stress upon the fact that that naturalist had only examined casts or models of the fossils in question, whereas the author of the present paper had inspected and carefully studied the originals. Mr. Owen's arguments were chiefly based on the distinctness of the true and false molars and of their sockets, each tooth being provided with two or more separate fangs, which were not anchylosed with the jaw-bone; on the unity of the jaw, which is composed of three pieces in the oviparous classes; on the form of the coronoid process, which, though lost, had left its impression on the matrix, which showed it to have resembled that of the Opossum group; on that of the inferior projecting condyle; and finally, it was stated that in the angle of the jaw of the *Marsupialia*, there is a constant modification not hitherto considered by the anatomists who have written upon the Stonesfield fossils, but which would serve to prove, if co-existent with a convex condyle, the marsupial nature of a fossil, though all the teeth were wanting: the angle of the jaw being bent inwards, in the form of a process, varying in shape and degree of development in the different genera. In the course of this paper, Mr. Owen frequently alluded to the late memoir of M. Valenciennes, wherein the conclusions of Cuvier respecting these fossils he deemed to be ably and successfully advocated. Two other communications were afterwards read, one by Mr. R. W. Fox, "On the formation, by voltaic agency, of Mineral Veins;" and the other, by Captain Alexander, "On the discovery of portions of the Mastodon teeth near Southwold." A brilliant discussion then ensued, in which the opinion of M. de Blainville was supported with great ability by Professor Grant, who had long previously entertained the same idea respecting the nature of the Stonesfield fossils, and had annually, as was well known to many naturalists present, expressed it in his course of lectures delivered at the London University.

DECEMBER 5th.—A communication was read from the council of the Natural History Society of Liverpool, entitled "An account of the footsteps of the *Cheirotherium*, and five or six other unknown animals, lately discovered in the quarries of Storeton Hill, between the Mersey and the Dee," and which was illustrated by some admirable drawings by J. Cunningham, Esq. In 1834, there were discovered in several quarries at the village of Hessberg, near Hildburghausen, casts in a gray quartzose sandstone, resembling, to a certain extent, a human hand, and for which Professor Kaup proposed the inappropriate name, as it now appears, of *Cheirotherium*. Similar casts were discovered in the early part of last June, in Storeton Hill quarries, which the workmen designated petrified hu-

man hands. The circumstance having been made known to the Natural History Society of Liverpool, a committee was appointed, which drew up the report under consideration. The red sandstone of the peninsula in which the Storeton quarries are situated, may be separated into three principal divisions, the medial of which is worked at Storeton, where the strata of marl and sandstone are of unequal thickness, and are separated by their seams of whitish clay. It was on this clay that the *Cheirotherium* and other animals had imprinted their footsteps; and the casts occur on overlying beds of sandstone, not exceeding two feet in thickness each. The best defined casts are those of a tolerably large animal, the hind feet of which measure nine inches in length by six across, and are about twice the size of the fore feet, the impressions of which latter are always immediately before the tread of the hinder, by which, in some instances, they are even partly effaced: in one case, the track of an individual was traced for sixteen feet along a single slab of sandstone. Although the footsteps of *Cheirotherium* are the most prominent, yet the Storeton quarries have yielded slabs covered by raised casts, derived apparently from Tortoises and saurian reptiles, the webs between the toes of which can be distinctly traced; and numerous smaller casts are very abundant, crossing in all directions, and proving that, at the period when these layers of clay and sandstone were deposited, the locality was thronged by multitudes of living animals. A note by Mr. J. Yates was appended to the report, giving a brief account of sketches of four distinct varieties of impressions, not including those of the *Cheirotherium*, or the web-footed animal. The next paper was by Sir Philip Grey Egerton, and was also "On the *Cheirotherium*." The two specimens particularly described were believed to have been obtained from one of the beds of sandstone which alternate with marl, in the upper part of the new red formation, near Tarporley. Sir Philip clearly showed that the marginal digit, or perhaps appendage, the exact nature of which is not obvious, but which had been considered as a thumb, would be the representation rather of the fifth than of the first toe, as its position was outward, unless, indeed, the animal crossed its feet in walking, which was altogether improbable. The casts of impressions which he now described being evidently those of a different species from the animals of Hessburg and Storeton, he proposed to term it, in compliance with the adage *ex pides Herculem*, from its very superior size, *Cheirotherium Hercules*.

CRITICAL NOTICES OF NEW PUBLICATIONS.

Elements of Physiology, by J. Müller, M.D. Professor of Anatomy and Physiology in the University of Berlin, etc. Translated from the German, with Notes by William Baly, M.D. Graduate of the University of Berlin, and Physician to the Pancras Infirmary. Illustrated with steel plates and numerous wood engravings. Part III, containing the Nervous System. 8vo, London: Taylor & Walton.

Human Physiology, by Dr. Elliotson. 8vo, London; Part II, containing the Animal Functions.

PHYSIOLOGY, the science of the laws which govern and regulate the functions of the organs of man, and the aggregation of those functions, called life, is by far the most arduous, although, perhaps, not the most obviously useful, of the medical sciences. Based on anatomy, and demanding the severest process of induction in reasoning on the results of experiment and observation; exercising the higher faculties of the mind, and demanding for its perfect intelligence the auxiliary aid of much and varied collateral knowledge, it has nevertheless invited and received the devotion of minds to whom, for the above reasons, it would not presumably be attractive; it has also occupied more congenial intellects, almost to the exclusion of other pursuits, except such as are cognate to the master subject: notwithstanding which advantages, it has progressed less rapidly than other branches of the healing art, of more practical and more apparent usefulness to man. There would seem, therefore, to be difficulties inherent in it, and not explicable on grounds which usually will account for the retardation of other studies. It cannot be denied that daily experience is disproving the mischievous doctrines which deaden enterprise by anticipating the impossibility of success. Even physiology itself occasionally presents an example of some fact being established, and superseding either an absurd hypothesis,*

* A very notable instance of the correction of errors, as plausible as profound, and which might be said to be exclusively in the possession of the learned, is the repudiation of the notion that the "active principle of the nerves," is the electric or galvanic fluid. A mistake that may almost be called gross, especially in the present state of our knowledge: yet we believe there has been no formal recantation; nerves being, as *wet cords*, good conductors of the galvanic fluid, it was inferred that conduction of the galvanic fluid was their proper office, and therefore that the nervous and galvanic were the same, the fluid being generated in other situations. This testimony (?) received farther confirmation from the *believed* fact that, when the vagus nerve was divided, and a galvanic current passed through the divided vagus to the stomach, digestion of food was performed as if the nerve had remained

or the hopeless incredulity which had abandoned the matter in despair: thus stimulating and justifying fresh exertions in the flagging or disappointed enthusiast. But it is to us more than questionable whether *all* the enquiries of the physiologist can be answered in *any* time; for they trench on ground in its very nature forbidden to mortal access, and involve the enquirer in bewildering speculations, from which the mind recoils, stunned with awe and amazement, but unilluminated by a single additional ray of knowledge. Here is the prime question in physiology—What is life? The boundary line dividing science from the knowledge of himself, denied to man by his Creator, it is not easy to perceive; for physiology, if pushed far, and then not out of its track, soon merges in psychology, after which we speedily come to a *punctum stans*. It is not here the object to discourage cultivation, nor to depreciate the valuable and interesting additions which genius, from time to time, has added to our physical knowledge of ourselves—far from it; but, with regret, we add that desert has greatly exceeded discovery. Our embarrassment increases when we come to find that the most distinguished physiologists differ widely from each other in some essential matters, where “both cannot be right;” yet both are plausible, and each has numerous followers, who hold, like good disciples, fast by the faith of their respective masters. It is fortunate for humanity that, with such diverse doctrines in physiology, there is no corresponding variety—to the same extent—in the application of its laws in the cure or treatment of disease, with which, indeed, it interferes less than it might be presumed to do, considering the estimation in which it is held by the scientific physician.

An example of the “DISPARATUS” in physiology may be made tolerably intelligible to lay readers thus: those laws called *physical* which govern inorganic *matter*, and which now, by the extension of knowledge, are familiar to most men of even limited education, are by some philosophers contended to be identically the same with the laws which regulate living organic matter. While, on the other side, it is insisted that the functions of organs are performed in obedience to *special* laws, which they call *physiological* or *vital*, and

sound. The author of the experiment forgot, as did his disciples, that the portion of a divided nerve which is separated from the brain is capable of resuming its function for a short season when stimulated—for *which purpose* it is not shown that the galvanic fluid is exclusively required, nor that, as in other nerves, *ordinary stimuli* as well as *special*, will not produce the effect. Also, the galvanometer failed invariably to prove the evolution of the galvanic fluid by means of the nerves, as conductors or generators. And a most conclusive disproof of the non-identity of those fluids (nervous and galvanic) would seem to be that, if the fluids are the same, there should not be the following dissimilarity: if a tight ligature be placed on a nerve in the living animal, the nerve no longer acts as a conductor of the *nervous* fluid: now, if the same proceeding be adopted again, the nerve, despite its ligature (which in the first case, prevented the transmission of the nervous fluid), perfectly well as before the application, serves as a conductor, and transmits the shock, galvanic or electric.

which, it is affirmed, have not even an analogy to the laws presiding over inorganic matter, viz. those of *Physics* and *Chemistry*. To many articles of which latter creed we seriously incline; and, without entering into the discussion, may just indicate that if those whom we, for distinction sake, but with no disrespect, somewhat paradoxically call the physical or material physiologists, are right in their assumptions, it would seem they ought not to be puzzled by the enquiry, "What is life?" more than by the question, What is motion, or electricity, or gravitation? All of which, with even a scanty knowledge, we know greatly more of than "life;" and yet they must be sorely distressed for a definition of life so excellent as to permit no exception to be taken to it. A curiosity to know more of ourselves than observation, unaided by science, affords, is natural to all mankind; and therefore it is that the professional inquisitors are not the monopolists of an interest only not universal: this fact, and the *popularity* of the subject, by its appealing to every man, in some shape, about dinner-time, have rendered *DIGESTION* an object of diligent and daily perquisition. Taste and utility invest it with consequence in both health and disease: the first, to reconcile what is pleasant with that which is harmless in our food; the second, to obviate or relieve disorders by means of diet. Man is by design an omnivorous animal;* and it can scarcely consist with the recognition of a fact so indisputable to say, *a priori*, that any food (not poisonous) is unwholesome for him who is by omniscience adapted to derive support and nourishment from all; and who, without such benevolent and wise provision, would perish of hunger in regions where he notoriously subsists and flourishes on substances which, in the imaginations of the more refined or more ignorant of his remote fellows, excite feelings of horror or disgust; many, indeed, of whom would actually starve on the revolting viands, unless, like

* "As the human race exists in more parts of the globe than any other kind of animal, we should have been but ill provided for if we had been destined to subsist on either description of food alone; whereas man now inhabits some countries which afford either vegetable or animal food only. Man is by far the most omnivorous of all animals, capable not only of feasting on luxurious combinations derived from each kingdom, but of subsisting with health and vigour on nearly one kind of the most simple food. Thus, to mention a very few instances, many at present live on vegetables only, as the tubers of *solanum* (potatoes), chesnuts, dates, &c. the first families of mankind most probably subsisted for a long period merely on fruits, roots, corn, and pulse. The nomadic Moors have scarcely any other food than gum senega: the inhabitants of Kamtschatka, and many other shores, scarcely any other than fish. The shepherds in the province of Carraccas in South America, on the banks of the Orinoko, and even the Morelachs in Europe, live almost entirely on flesh. Some barbarous nations devour raw animals. This cannot be denied to have been formerly the case with the Samojedes, the Esquimaux, and some tribes of North America. Other nations are no less remarkable in their drink. The inhabitants of many intertropical islands, especially in the Pacific Ocean, can procure no sweet water, and instead of it drink the juice of cocoa-nuts. Others take only sea-water: and innumerable similar facts clearly prove man to be omnivorous."

himself, they were indigenous with the diet. Such well-known facts suggest the policy of learning to increase and to economize the materials of nourishment, many of which are wasted or neglected in great abundance: a circumstance more discreditable to the intelligence of the country than to its ignorance, from which last it cannot entirely proceed, as general science possesses the means of vastly multiplying wholesome food from sources which it were sinful to neglect longer. However pernicious may be intemperance and excess on individuals—and circumstances tend to make both those terms arbitrary in particular cases—it is certain that, on the whole, luxury and refinement, as the fruits of intelligence, are favourable to health and longevity; and we are truly taught by reasoning and observation that quantity of food affects the health more directly than its quality, due regard being taken to ensure those advantages of preparation which do not significantly add to its cost, yet greatly augment its pleasant sapidity, and neutralize or modify an ill flavour, and subserve to diminish the waste of unemployed portions.

It may be necessary that our knowledge of the function of digestion, and the process of renovation or nutrition, shall be greatly increased, before we can say with certainty to what extent science may render subsidiary to the sustentation of man, a long catalogue of articles of natural and artificial production, which, in the prodigality of his present resources of civilization, he rejects or entirely overlooks.

Physiology cannot be more usefully employed than in enlightening a subject of such invariable interest as enquiring into the nature of digestion and nutrition, and deducing therefrom conclusions which will assist him in the choice, preparation, and economy of food. In investigations for this purpose, none have approached in certainty and usefulness the observations and experiments of Dr. Beaumont, which gave results wholly unaffected by those disturbing causes in physiological experiments of which we shall presently, with justice, complain.

The pursuit of physiological studies demands untiring zeal, not far removed from enthusiasm, combined with habits of industry, patient research, and abstinence from a tendency to hasty generalization. The sense of vision should be acute, and that of hearing not less so; for both those faculties are often called into requisition, as is also a correctly discriminating power of smelling, and an exquisite delicacy of manipulation in performing experiments on the minute structures and objects which are the subject of inquiry.

It is probable that to deficiency in some or all of those pre-requisites we owe the discouraging and dissimilar results from identical investigations; and it cannot be otherwise than that too often a new and disturbing element, more or less fatal to the accuracy of the results, is introduced in the way we are about to describe. Our objection has oftener been anticipated or overlooked than obviated or corrected. In experiments performed on living animals, the deductions must be frequently faulty, or altogether fallacious; for, how-

ever skilfully performed, the organs investigated must have their functions greatly deranged by the injuries unavoidably inflicted by the anatomist; doubtless, some of the phenomena are modified by such violence, but, notwithstanding, they are assumed and described to be the normal qualities and performances. This is an evil more easily complained of than averted or redressed; yet it happens oftener than it is allowed for, and, with very astute professors, occasionally goes for less than it is worth.*

Far more stress is frequently laid on a circumstance of no deteriorating consequence to science, although not with the same impunity to humanity, which is thereby impeached to an unmerited extent, and sometimes with more exaggeration than reason, or altogether without truth and justice. It is said, the alleged cruelty of many experiments withholds their justification. Now it may have happened that some were of unnecessary severity, or occasionally uncalled for; but these charges, if sustained, impugn neither the necessity nor usefulness of the majority, and cannot be objected against more than a very few. No man of morality, and therefore of religion and humanity, can look with indifference on the infliction of pain, nor without abhorrence and indignation when the cruelty is malignant or wanton. We disclaim the imputation of insincerity and unworthy motives, for *some* of those persons whose tenderness leads to the complaint; for we well know many estimable individuals whose sensibility prevents them from assenting to the proceedings (objected to as barbarous) on the grounds of expediency, usefulness, or even admitted necessity. Perhaps it is expecting too much to require they should regard approvingly, under any circumstances, what they so unqualifiedly condemn; nevertheless, candour demands a mitigation of their severe denunciations until their consistency shall be more apparent than their sympathy. Of such ob-

* In operations on the brain of living animals it must be difficult, or rather impossible, to remove, or destroy one cerebral organ, without prejudice to others; and hence error, or confusion, in the results. Gall asks, "Where is the anatomist or physiologist who precisely knows all the origins, the whole extent, all the ramifications, all the connections of an organ. You remove the cerebellum, at the same moment you severely injure the medulla oblongata and spinalis; you injure the tuber annulare; you injure the tubercula quadrigemina; consequently your results relate not merely to all these parts, but to all those which communicate with them, either directly or indirectly. You think you have insulated the tubercles; but these tubercles have connection with the corpora olivaria, the medulla oblongata, the cerebellum, the sense of vision, and many convolutions; the thalami optici, the corpora striata, are connected *below* with the crura cerebri, tuber annulare, the medulla oblongata, the pyramids, and the spinal marrow;—*above*, with all the cerebral membranes, all the convolutions, the non-fibrous grey substance of their surface with the different commissures, as the anterior commissure, the great commissure, &c. &c. Thus, there does not exist a cerebral part which we do not know to have numerous connections with other parts. I do not except even the corpora mamillaria, the pineal gland, the infundibulum, &c. *The connections yet unknown* are unquestionably yet more numerous." "Sir Charles Bell has lately imitated Gall in objecting to vivisection as a means of discovery."—Vide Elliotson's translation of Blumenbach.

jectors we have known those "whose house on that aspect was one pane of glass." Some such folk have viewed without heart-breaking a horse-race—a bull bait—a boxing match—a cocking—and a dog fight—nay, have voluntarily beheld a military flogging and an execution! some with indifference, others with pleasure even to participation, but none of which have they spoken of with the reprobation to which they consign the anatomist who, for the highest and most useful purposes, is the instrument of pain to an animal less than is usually apprehended, and the sufferings of which are not augmented by the vague terrors and undefined fears which, it is known, are generally the severest portion of many indispensable and alarm-creating surgical operations.* The worthy persons we allude to also, we believe, ride in cabs when in haste, a contingency which it is on all hands agreed is not conducive to the natural benevolence of the driver, nor to the ease and convenience of the horse; they have but few sorrows for factory children and hand-loom weavers; they eat oysters alive; they hunt the hare, the deer, and the fox; and, with equal consistency and complacency, fish with live bait for perch and pike; none of which acts have the plea of necessity, nor all, the excuse of "lawful pleasure," the last being restricted to its severest signification. Their concern for the subjects of physiological experiments we would not denounce as pseudo-humanity, nor can we admit it to be quite genuine; it is an affair of mixed motives, a sort of compromise between things they love but ought not, and things they love not. We fear that one grave charge could be substantiated against some experiments, namely, an unnecessary frequency of repetition, for *verification*: surely the results of many experiments are sufficiently proved to be uniform and genuine to deserve assent on authority, dispensing with reiterated proof not demanded by scepticism; and which are cruel, because not justified by necessity. That certain poisons are fatal to animal life in very small doses is a fact no longer needing the proof to be exhibited; yet we have seen in chemical lectures a cruel and unnecessary waste of animal life, a cruel and unnecessary infliction of pain, to demonstrate what is not doubtful, nor required to be seen in order to its belief: as that strychnia and hydrocyanic acid are deadly substances.

* Müller says that some animals, rabbits especially, are so frightened by the first steps of experiment, before they have suffered any considerable injury, that the skin has become apparently insensible to pain from cutting and pinching. This must, however, be considered unproved; for there are many examples of the endurance of suffering without the ordinary manifestations of sensibility. Another circumstance may be worth considering; it is highly probable that the effects of terror on animals may somewhat vary from those in man, in whom the imagination plays so conspicuous a part, brutes having no analogous faculty. Fear, alone and indefinite, is less torturing than when it is combined with the uncertainty of ignorance of the evil to come, and which is supplied, and mostly magnified, by the imagination; and it may be that a slighter stimulus would produce proofs of sensibility—as tickling, which we well know excites peculiar sensibility when a ruder contact fails.

If the sanative effects of medicine could be ascertained by their previous exhibition to brutes, and relied on for our guidance in prescribing for man, the immolation of a hecatomb of animals for health's sake would be as justifiable as the slaughter of a herd of oxen for his esurience, and on the same grounds. Unluckily there are but few resemblances between man and most animals, in the operation of drugs on both. The varying and sometimes opposite effects of medicines on horses are well known to veterinarians; and disappointment on the subject might, we think, have been anticipated, as nothing can well be more remote than the analogies on which rested the expectation of identical effects from the same supposed remedies. On horses, opium, mercury, nitrate of potass, sulphate of magnesia, and antimony, are examples. Opium is vastly less striking in its effects as an anodyne and a narcotic: sulphate of magnesia (Epsom salts) is questionably aperient. Tartrate of antimony less striking as a diaphoretic (promoter of perspiration); and as an emetic it is not employed, from the fact of the horse's stomach being anatomically inimical to such an operation. Nitrate of potass (nitre, or saltpetre) is inoperative, or very nearly so, as a diuretic. However, it is to observation more than to physiology we owe our knowledge of the value and effects of medicines: for their use is commonly empirical, though directed by the best informed. That carbonate of iron should in "St. Vitus's dance" (especially when occurring before puberty) be almost a specific; that arsenic should have nearly the same effect on the same disease, when not depending on diseased changes of structure of the brain; that creosote, a newly-discovered essential oil, a product of the destructive distillation of wood, sub-nitrate of bismuth, and hydrocyanic (prussic) acid, should be *all* nearly omnipotent in obstinate vomiting not symptomatic of inflammation of the stomach (*gastritis*) and a few other occasional causes, we owe to observation and experience; and while we remain ignorant of their *mode* of action on the stomach and nervous system, we can hardly look to physiology for lights.

But to physiology we owe infinite obligations for a knowledge, limited as it is, of the brain and nervous system; and here this elevating science bids fair to be suggestive of something we may be able hereafter to accomplish for the treatment of their functional derangements. By *proving* the office and healthy operations of the respective divisions of those organs only can we ascertain, by their disturbance, the *seat* of the disease, which is ever formidable. In hydrophobia, epilepsy, tetanus, and insanity, we have nearly every thing to learn, if it is fated that any thing more is to be accomplished. Already we can with certainty localise some affections, especially when the cause exists near the base of the brain. In like manner, internal injuries inflicted by external violence have sometimes their precise seat indicated by the symptoms; but these advantages are among the benefits conferred by physiology, and their value is beyond calculation. The two most recent additions to this science are the works before us: different, yet alike. Dr. Elliot-

son's title we take to be an assumption, notwithstanding his excuse. In 1815 he translated (anonymously) Professor Blumenbach's *Institutiones Physiologicae*. In 1817 he published a second edition, with his name, and the addition of one hundred and fifty pages of notes. In 1820 he published a third edition, with two hundred pages of notes. In 1824 he published a fourth edition, *from a new edition of the original work*, with three hundred and fifty pages of notes, which notes greatly exceeded the text. The fifth edition is a still farther enlargement and improvement on its predecessors, and brings before the reader very nearly all that is known in the most lucid manner, and expressly calculated for "the general reader; since such works are now read as much out of the profession as by medical men," as they well deserve to be. Dr. Elliotson has thought proper—and we have no quarrel with his judgment on this point—to omit a great deal of Blumenbach's text, not from any demerit, but because the science has advanced beyond the last edition of Blumenbach—the patriarch of physiology. The deficiency is made up by excellent notes, consisting of reference to, and extracts from, every accessible and respectable authority. Now we are at a loss to discover by what reasoning the omission of Blumenbach's and the substitution of fifty others' matter can entitle Dr. E. to call the work "Elliotson's Physiology:" "Everybody's Physiology" were a fitter name. However, he expresses, with great confidence, that he is sure Blumenbach will not object (we have not heard that he did in 1835),* and we have even a less right; yet it may appear to the readers of the work that Dr. E. is rather to be regarded as a profound critic than a professed physiologist; in which *first character he leaves nothing to be wished for* in the way of candour and fitness; albeit he is often self-complacent, sometimes supercilious, and occasionally trenchant: yet these are more allied to the confidence inseparable from competence and courage, than vanity and ill nature. And it should be remembered that his unselfish nature, preferring truth for her own sake, and always perilling his ease where he believes he is her champion, he has sometimes incurred the hostility of ignorance and envy to an extent that might well excuse a more energetic defence of himself than even he makes in the second part of the present work. It must be also remembered that he is a true disciple of Dr. Gall, which is a very different affair from being a "phrenologist," in the received acceptance of that term. That branch of physiology as treated by Gall and defended by Dr. E. is another thing than what is assailed by its opponents and understood by the "bumpists." On the subject in question there is greater misapprehension than on any other with which men, not extremely scientific in their occupations, meddle; and as its propounders have been oftener amateurs than professors, the subject has suffered by the incompetence of the teacher, more in actually misleading than

* Vide preface to the fifth edition, part i, February, 1833. The second part is recently out, 1838.

from deficient zeal. This could hardly be otherwise, for phrenology is not an independent science; it is an integer in physiology, and cannot be dealt with by ordinary minds with ordinary attainments. Indeed, such individuals are as little capable of thorough conversion to, as they are impercipient of arguments militating against, the doctrines.

We believe that Phrenology cannot, for those reasons, ever be popular; in other words, it must remain an affair of *faith* to all who bring not the talent, learning, and great observation, essential to *conviction*. As it is expounded by the majority of its teachers, it is the crude, fanciful, unsatisfying affair, that its equally ignorant objectors partially succeed in representing it, many of them, honestly, knowing no more of it than is described by the vulgar and incapable, who, adding enthusiasm to ignorance, bring down discredit on that, which, if understood, deserves all honour. A wide space sunders Müller from Elliotson; the last is a worshipping disciple of Gall; and what is vastly more rare than admiration of that great man, perfectly understands the doctrines of which Gall is the apostle: on the other hand, Müller, after making admissions the force and effect of which he seems not to have calculated, winds up by concurring with the opinion of a French physiologist, every way inferior to himself, (Majendie) that cranioscopy or phrenology may be reckoned with astrology and alchemy! which opinion is tantamount to absolute proof that Müller *never read* Gall, which is equivalent to proving, that, *ex necessitate*, he cannot by any possibility understand phrenology, although he presumes to pronounce *ex cathedra* against it. Nearly all the normal and also the morbid phenomena of the nervous system, were known to the ancients; but it was left to others, and of this day, to claim the merit of more correct knowledge going beyond that, which is merely observed without being understood. To the known functions of the brain, spinal cord, and ganglionic system, is now, by some, added another, long since obscurely recognised as something allied to "sympathy," and now baptised by one of the claimants to originality, as the "reflex function" of the spinal cord, a term, it is insisted, about as original as the discovery, both of which, it is asserted, with much confirming testimony, were not unknown to Prochaska in the last century. Of living candidates for the credit of a "discoverer," Müller is one, and that he is a "discoverer" we have no doubt.

To the existence of the reflex function as a previously unknown and not understood function, Dr. Elliotson is opposed, and with candour and ability, makes a strong opposition to the novel claims of recent discovery and superior information. As the advocates of the novelty of the theory admit that more remains to be done, e.g. the discovery of special nerves, (called by Dr. Hall "excito-motory") for the performance of the reflex function, it is hard to come to a conclusion unalterable: while it ought to be mentioned that an excellent anatomist (Mr. Grain-

ger) offers good evidence of his having nearly completed the discovery, which, when fully completed, shall leave the thing no longer disputable. None of the opponents of the "reflex function" doctrines equal Dr. Elliotson in argument and ingeniousness, nor is their hostility so cogent; but we confess, he fails to satisfy us that he is right on an important point, distinguishing him from others, and of those, most conspicuously, Müller.* In examining this subject, a striking difference is apparent in the modes of reasoning and research of Müller and Elliotson; a difference which indeed often gives a preponderating advantage to the distinguished German; he leaves no doubt on the mind, that his belief on any given point, is the result of reasoning on what he actually saw and experimented; phrenology alone excepted. Too often a great good has a proportionate alloy or qualification arising out of human fallibility, over estimating in its pride its seeming triumphs in the search after truth, sometimes causing too large a reliance on what are called facts: it is not necessary to give examples in proof, that generally, even the most indifferent logicians are oftener to be relied on in their ratiocination, than in their facts; a circumstance not necessarily invalidating their honesty. In experiments, the chief object sought, and sought with the greatest avidity, is that which adds confirmation to a *foregone* conclusion, notwithstanding, it is sometimes coupled with other consequences, which, if not neutralizing, at least, so qualify the main one, as to abate considerably its value: with the sanguine, and the short-sighted, these deductions are not duly allowed for, and a common, vitiating effect, is, "proving too much." The sources of error are innumerable where the senses are concerned—they are notoriously more easily imposed on than the judgments, and the differences in men's *sensient* perceptions are greater, than in their *mental* percipience of disparity: add to this the readiness with which men are persuaded to believe that which they wish to be true. To what but defective observation of facts can we ascribe such things as follow? Wilson Philip contends that division of the pneumo-gastric nerve suppresses secretion of the gastric juice, and arrests digestion: on the other hand, Leuret and Lassaigne maintain, that digestion proceeds as before, after six inches of *each* nerve.

* Dr. Elliotson, without foreseeing the consequences, almost admits the existence of the excito-motory functions, when he says, "The functions of the lungs and stomach could hardly proceed without sensation" (page 437). He could scarcely mean, by "sensation," in the sense used, "common sensation," as *consciousness* of those organs exists only when they are diseased or disordered; but they have a peculiar excitability, which Müller and Hall show is *proper* to them, and the appeal to which, by the "excito-motory" portion of the nervous system, leads to the performance of actions proper to them. *Consciousness* of sensation would prove disease in those organs: and when organs respond to the stimuli peculiar to them, and essential to excite their proper function, the impression is not recognized by the brain, as that organ is conscious of pain produced by injury, or is aware of external existences.

is removed! The conclusions are opposite of Drs. Wilson Philip and Brachet; the first, *obviated the ill effects of the removal of a piece of the pneumo-gastric nerve, on the lungs and stomach, by supplying these organs with the galvanic influence*; and hence, among other notions, inferred that the nervous and galvanic fluids are the same; but, Dr. Brachet produced the *same* results by merely *irritating* the divided nerve going to the stomach.

Physiology teems with similar contradictions; and anatomy, which from its more material and apparent nature, would seem to be by right exempt from such uncertainty, furnishes similar examples, though not to the same amount! *e.g.* the "respiratory tract" of Sir Charles Bell is sometimes wanting, but its alleged function never. And it was but recently that the anatomy of the liver came before us, demonstrated as widely different as possible from any former description and preconceived notion of it! The microscopic investigations of Ehrenberg would prove that the nerves are *tubular*: Raspail, on the contrary, asserts that they are aggregations of "*solid cylinders*, each invested, like muscular fibrils, with a fine membrane, and the whole with a common covering to form a trunk. He declares that no *tube* exists in them, as many have asserted." We may observe that Müller's views agree with Ehrenberg's; confirmed by observation, Müller says that the experiments of Ure and Wilson Philip have given rise to misconceptions—alluding to the now refuted hypothesis before corrected, that the electric and nervous fluids are similar, instead of being, as they certainly are, totally different. He also, with much graceful admiration, assigns to Sir C. Bell the merit of *first* suggesting the division of the roots of the spinal nerves into *motor* and *sentient*; the first coming from the anterior, the second from the posterior, columns of the cord. Bell afterwards proved this to be the case as relates to the anterior or motor roots; but left unsettled (to the satisfaction of some) whether he was *convinced* of the uses of the posterior roots in reference to sensation; a point which Magendie did certainly afterwards establish, and, if Dr. Elliotson can be credited, without access to a privately-circulated pamphlet by Sir C. Bell many years before (1811). Very few will submit to the confident assertion—a mere and worthless assertion—of Dr. Elliotson, that Magendie did not so obtain the elementary materials of what he stoutly contends is a discovery of his own. We fear we must retract some portion of the generally well-deserved praise we so warmly accorded to Dr. Elliotson at the beginning of this article, for his tone of expression when speaking of Sir C. Bell is unworthy of both; and unless Dr. E. shall make a discovery of equivalent value, great as is his acknowledged merit, his immortality must be postponed: in the mean time Sir C. Bell may be said to have—exclusive of other great merits—by this discovery alone, deserved and achieved a philosophical apotheosis. These two specimens will suffice to acquaint the reader with the startling disagreements prevailing in the regions of

science, where all should be harmony and agreement; and also prove that essential to the establishment of every truth, is the passage of a long period of time.

We hope it will not be deemed inconsistent with the commendation bestowed on Dr. E.'s work, that while acknowledging its full value, we avow that Müller's will be more frequently confided in as an *authority*: while Dr. E.'s compilation, being rendered more attractive by the copiousness and variety of its materials, will insure more extensive perusal, and may probably have the good fortune to inspire its readers with a taste for its subject,—where genius leads, the world will follow—Müller has beyond doubt established for himself claims to be so considered, and the confidence which he clearly has in himself will inevitably be shared by his readers. His book, then, holds a place of advantage over Elliotson's, which savours more of the character of an arbitrator or umpire, than of a pioneer who has broke and cleared the ground for himself. In these expressions it is very far from our intention to disparage its great merits: but it is certain that confidence is more likely to follow originality than imitation; and we make no doubt that every article in the physiological creed of Müller is the result of proofs with which all must be satisfied; and, where doubt was unavoidable, that he repeated for himself the experiments of others, and satisfied himself by this mode of verification before he adopted a single particular. We cannot deny the probability that he sometimes shares the fate of his predecessors in being deceived by appearances, and deduces conclusions which his future observation, or that of others, may correct; still he is not one likely to remain satisfied after the suspicion of fallacy: and it may be predicated of his candour that he would be the first to recant an error, whether of observation or of opinion.

We expect that a long time must elapse ere another system of physiology will supersede Müller's; and when that occurs, it will certainly owe its precedence to the added discovery and confirmation of time, rather than the substitution of other views for those, many of which this book will help to establish. He is not merely a correct observer—demanding, as we have elsewhere shown, qualities so rarely found—but he reasons like one whose judgment could not be betrayed by a sophism: it is severely inductive. His good fortune is conspicuous in being translated by one who has rendered great—we had almost said complete—justice to his original; and the work, consequently, doth not read like a translation. The translation is worthy of the original; both are excellent, and will, doubtless, give an impulse to the study of a science which hath rendered great service to humanity, and, if prosecuted with zeal, promises to lay it under still greater obligations. Last, but not least, it will—at least, the hope is reasonable—stimulate our countrymen to an emulation of their continental fellows, and no longer leave England subject to the reproach of bringing up the rear in this one of the medical sciences, instead of,

as in most others, leading the van. That such is desirable on other accounts, will not be questioned by those who shall be told that it is but very lately physiology forms more than incidentally a part of the medical pupil's education: all the physiology he formerly got,—save what he resolutely sought and obtained for himself—was the miserable modicum forming a very small and uncertain portion of his anatomical lectures! Within the last few years the scene has wholly changed; and not only is it more specially insisted on and cultivated, but its attractions solicit the attention of students, many of whom possess an amount of this knowledge that would have made a professor thirty years ago! It enjoys the enviable advantage of receiving much reflected light, and invokes the successful aid of nearly every other science, or some of their branches, especially chemistry, which itself may be considered as a science almost new, if we contrast the wretched, piebald, empirical cookery, that was honoured by that name not very long since. Again, to France and Germany we owe an unpayable debt of gratitude and utility, for redeeming the state of things just alluded to, and elevating chemistry into the glorious science it now is, meliorating the condition of man in all countries, and in every conceivable way adding to his knowledge, enlarging his intellects, subduing to his will and for his use the most “gnarled and unwedgeable” materials in nature, heretofore wasted or neglected as worthless or impracticable: in fine, conferring advantages which are incalculable by means that are infinite.

Microscopic Illustrations of Living Objects, their Natural History, &c., &c. with researches concerning the most eligible methods of constructing Microscopes, and instructions for using them, by G. R. Goring, M.D. a new edition, emended and enlarged; by Andrew Pritchard, M.R.S. 8vo, London, 1838, pp. 248, with many cuts and coloured figures.

The “Microscopic Illustrations” were first published in 1820; the work is now reproduced in an amended form, with the addition of subsequent discoveries in the construction and uses of the microscope. The present edition opens with introductory remarks on the application of this wonderful instrument to the sciences, and an account of its recent improvements. Then follow three descriptive chapters on the larva and pupa of a straw-coloured plumed gnat, the *Corethra plumicornis* of Stephens; on the larva and chrysalis of a day-fly, the *Ephemera marginata* of Stephens; and on the larva of a species of British hydrophilus, the *H. caraboides* of entomolo-

gists. These three subjects are admirably illustrated with exquisite microscopic figures, plain and coloured, and altogether they constitute a most beautiful and instructive study for the lovers of natural history. One chapter is devoted to an explication of the terms employed in microscopic science, including a description of the vertical microscope; and, in another chapter, the achromatic telescope, with its apparatus and the mode of using it, is perspicuously explained by descriptive and graphic illustrations. Among his practical remarks on microscopes for viewing and drawing aquatic larvæ, Dr. Goring introduces the important observations,—*that water-insects do not appear to require air to support their existence, and that Thames-water is utterly poisonous to nearly the whole race of aquatic insects.* In a particular discussion, he endeavours to answer the inquiry, "Whether there is a best possible way of constructing the stand or mounting of Microscopes, the specific purposes to which they are applied being first determined; and, from the reasons and facts adduced by him, he deduces the conclusion, "that the *principles* at least of the best possible construction of the mechanical part of microscopes, may be defined." To this, he adds a proposition to supplant the term *compound microscope*, by the word *ENGISCOPE*, formed of *εγγις*, *nigh*, and *ενεριν*, *to view*, which well expresses an instrument for closely observing near objects. The doctor trusts that his designation for the compound microscope will be adopted as lawful and orthodox; and, entertaining the same impression, Mr. Pritchard gives a minute description of the instrument, under the name of "*Dr. Goring's Operative Aplanatic Engiscope*," and he exhibits all its parts distinctly on a plate containing twenty-five representative figures. In the last chapter, Dr. G. furnishes the reader with very full and clear directions regarding the manner of observing with, and managing, his new instrument, which is denominated "*Aplanatic*" for the reason that he considers it "free from both kinds of aberration, or devoid of all errors." An appendix to the treatise consists of four appropriate articles—on the optical phenomena of certain crystals, and further observations on the same, by H. F. Talbot, F.R.S.—the exordium to the first edition of this work, by Dr. Goring,—and an account of Swammerdam's method of dissecting and preparing objects for the microscope. Such, then, is an analytical view of the "*Microscopical Illustrations*," which, in all that concerns the engravings and their colouring, the descriptions and their philosophy, do constitute a scientific monograph pre-eminently remarkable for the excellence of its arrangements, the perfections of its graphic representations, and the amusing as well as instructive tendency of its principles.

An Historical View of the Nature and Results of Vaccination, as unfolded in Dr. Baron's "Life of Jenner," by Vigornensis; 12mo, Stratford, Worcester; Rivington, London.

VIGORNENSIS has here indited an extremely sensible, judicious, and instructive review of vaccination and its beneficial results. His monograph is finely characterized by the dignified elegance of a gentleman, the politeness and erudition of a philosopher, the energetic and glowing beneficence of a philanthropist. Every well-wisher of mankind will cordially join in a sincere recommendation of the book, as a means most admirably calculated to moderate or remove the prejudices that may anywhere exist against a salutary process, whereby incalculable advantages might be conferred on every human family, through successive ages, to the end of time.

OUTLINES OF PERIODICAL LITERATURE,
RELATING TO THE NATURAL SCIENCES & PHILOSOPHY.

(Continued from page 178 of the present volume.)

The Magazine of Natural History, and Journal of Zoology, Botany, Mineralogy, Geology, and Meteorology, conducted by Edward Charlesworth, F.G.S. 8vo, London, 1838.

NO. XXII, OCTOBER, 1838.—Dr. Drummond opens this number of the Magazine with the first of a series of notices of *Irish Entozoa*; and, in this, he adopts Rudolphi's nomenclature and classification. The doctor's first subject is the *Echinorhynchus acus*, an intestinal worm, which is particularly frequent in fishes of the Cod tribe. He characterizes the animal, both ordinarily and specifically; gives six figures, in illustration of its ova and other parts; defines its ascertained habitates; and, with a train of ingenious experimental descriptions of the economy and physiology of this parasite, he furnishes a truly valuable contribution to the Irish entozoology. From accurate and repeated observations with the microscope, he concludes that the echinorhynchous ova are expelled through a caudal pore: altogether, his article well merits the attention of naturalists. Mr. Skaffe continues his essay on the Ornithology of Blackburn; and, under the order SCANSORES, four species—*Picus viridis*, the green woodpecker; *P. major*, the greater spotted woodpecker; *Yunx torquilla*, the wryneck; and *Cuculus canorus*, the cuckoo—are set down for north Lancashireans. Among the GALLINÆ, stand *Lagopus britannicus*, the red grouse; *Perdix cinerea*, the common or grey partridge; *Coturnix dactylisonans*, the common quail; *Columba palumbus*, the ring-dove; and *Phasianus colchicus*, the common pheasant: in foot-notes Mr. S. adduces his reasons for preferring *Britannicus* as the specific term for red grouse; and he states that the golden pheasant has been naturalized in a gentleman's preserves near Preston, where the breed multiplies with great rapidity. Thirty species of GRALLÆ are then enumerated. These are,—*Charadrius pluvialis*, the golden plover; *C. morinellus*, the dottrel; *C. hiaticula*, the ringed dottrel; *Squatarola cinerea*, the grey plover; *Vanellus cristatus*, the lapwing; *Hæmatopus ostralegus*, the oyster-catcher; *Ardea cinerea*, the common heron; *Botaurus stellaris*, the bittern; *Numenius arquata*, the curlew; *N. phaeopus*, the whimbrel; *Scolopax rusticola*, the woodcock; *S. major*, the solitary snipe; *S. gallinago*, the common snipe; *S. gallinula*, the jack snipe; *Limosa fusca*, the bar-tailed godwit; *Tringa canutus*, the knot; *T. subarquata*, the pygmy curlew; *T. alpina*, the dunlin or purr; *T. minuta*, the little stint; *Arenaria calidris*, the sandpiper; *Phalaropus lobatus*, the grey phalarope; *Streptopelia interpres*, the turnstone; *Totanus calidris*, the redshank; *T. ochropus*, the green sandpiper; *Rallus aquaticus*, the water rail; *Crex pratensis*, the land rail; *C. porzana*, the spotted rail; *Gallinula chloropus*, the water hen; *Fulica atra*, the coot. The birds of this order are distributed into four families—the *Presi-*

rostris, *Culicrostres*, *Longirostres*, and *Macroductyla*; and, with reference to a lancastrian specimen of the *Scolopax sabini*, you have an interesting footnote. Mr. S. distinguishes fifty species of the PALMIPEDS, arranged under the four families—*Brachyptera*, *Longipennata*, *Totipalmata*, and *Lamellirostres*—and his individuals are, *Podiceps cristatus*, the crested grebe; *P. rubricollis*, the red-necked grebe; *P. minor*, the little grebe; *Colymbus glacialis*, the northern diver; *C. arcticus*, the black-throated diver; *C. septentrionalis*, the red-throated diver; *Uria troile*, the foolish guillemot; *Mergula melanoleucus*, the little auk; *Fraterculo arctica*, the puffin; *Alea torda*, the razor-billed auk, which is the same bird as the black-billed; *Thalassidroma pelagica*, the stormy petrel; *T. bullochii*, the fork-tailed petrel; *Lestris richardsonii*, the black-toed gull; *L. parasiticus*, the arctic gull; *L. pomarinus*, the pomarine gull; *Rissa cinerea*, the kittiwake; *Larus canus*, the common gull; *L. argentatus*, the herring gull; *L. fuscus*, the lesser black-backed gull; *L. marinus*, the greater black-backed gull; *L. glaucus*, the glaucous gull; *Chroicocephalus rudibundus*, the black-headed and red-legged gull; *Sterna anglica*, the gull-billed tern; *S. cantiaea*, the Sandwich tern; *S. arctica*, the arctic tern; *S. marina*, the great or common tern; *S. minuta*, the little tern; *S. nigra*, the black tern; *Phalacrocorax carbo*, the cormorant; *Sula bassana*, the gannet; *Mergus merganser*, the gosander; *M. serrator*, the red-breasted merganser; *M. albellus*, the smew; *Fuligula serina*, the pochard; *F. cristata*, the tufted duck; *F. gesneri*, the scaup duck; *Oidemia nigra*, the scoter; *O. fusca*, the great black or velvet duck; *Clangula chrysophthalmos*, the golden eye; *Marca penelope*, the widgeon; *Querquedula crecca*, the teal; *Chaliodus strepera*, the gadwell; *Rhychaspis clypeata*, the shoveller; *Anas boschas*, the wild duck; *Tadorna belonii*, the shieldrake; *Anser segetum*, the bean goose; *A. palustris*, the wild goose; *Bernicula leucopsis*, the barnacle goose; *B. brenta*, the brent goose; *Cygnus ferus*, the wild swan. To the Lancashire Fauna, this list of Mr. Skaife's forms a valuable contribution. For article 111, you have an essay on the peculiar insulation of the Nervous currents in the Chameleon, with observations on the change of colour in that creature, by Dr. Weissenborn. Among a diversity of remarkable inductions, this eminent naturalist arrives at the following—that one lateral half of the animal is often of a colour decidedly different from that of the other; that the nervous currents in one lateral half of the chameleon are going on independently of those in the other, and that this animal has two lateral centres of perception, sensation, and motion, besides the common one wherein the faculty of concentration resides; that, notwithstanding the strictly symmetrical structure of the creature, as to its two lateral halves, its eyes move independently of each other, and convey different impressions to their respective centres of perception; that, when it is agitated, its movements appear like those of two animals glued together, each half wishing to move its own way, without any symmetry of action; that the creature may be asleep on one side, and awake on the other; that its changes of colour depend altogether on the degree in which the nervous system is stimulated or inactive; that a superficial whitish pigment in the cutaneous system always determines the animal's general colour when *undisturbed*, *relaxed* or *torpid*, whereas the other hues develop themselves according to the degree in which a dark cutaneous pigment is excited; that the colour of the chameleon is of a pale almost uniform kind, during sleep, when it is wrapped closely in flannel or wool and left in a quiet

state, when it has been exposed for a considerable time to intense sun-light, and when it is dead; and that its pale colour is exchanged for other hues when the creature is suddenly exposed to the sun's rays, when its body has been heated to $90\frac{1}{4}^{\circ}$ F. for then its vital powers and functions are most energetic, and its colours most strikingly contrasted, and when it is handled or alarmed or surprised or thrown into water or exposed to rain. This paper of Dr. W.'s prefers extraordinary claims on the consideration of physiologists. Mr. Morris illustrates his observations on the deposits containing Carnivora and other Mammalia in the valley of the Thames, with a good figure of a bear's fossil tooth, and he describes the localities and their stratification where "mammalian remains" have been exhumed: these belonged to the elephant, rhinoceros, hippopotamus, horse, deer, Irish elk, vole, bear, hyena, and perhaps the lion: his list of shells occurring in the mammaliferous deposits contains eight bivalves, thirty univalves, and one of the crustacea: they are scarcely ever accompanied with any trace of vegetable remains. As a suitable addition to the preceding article, Mr. Sowerby institutes a comparison of *Cyrena*, *Valvata*, and *Unio*, found at Grays, with recent species, and he figures a *Valvata* and the valves of a *Unio*, both in the fossil state, as illustrations. Next in order, come the recent researches in fossil zoology of Mr. Von Meyer, in an English version. They relate to the *Pemphix sueri*, *P. alberti*, *Limulus priscus*, *L. agnotus*, *Erion hackmanni*, *E. schuberti*, *E. rhemani*, *Glyphea grandis*, *G. reglegani*, *G. ventrosa*, *G. munitaria*, *G. dressieri*, *G. pustulosa*, *G. mandelslohi*, *Prosopon simplex*, *P. helica*, *Plateosaurus* a new gigantic saurian, *Reteosaurus* with its hermetically closed marrow-tubes, *Mastodonosaurus*, *Chelonis gigantea*, *C. knorri*, *Plesiosaurus*, *Nithosaurus*, *Drucosaurus*, *Nothosaurus goldfuei*, *Condriosaurus elevatus*, *Charitosaurus ischidii*, *Pterodactylus lavateri*, *P. macronyx*, and *Machinosaurus hugii*, with its teeth of a blunted conical form, dense and striped. Articles VI and VII consist of replies and explanations which are not anonymous, and these are succeeded by an instructive practical communication, wherein Mr. Cooper gives the details of an excursion to Woking, made in the summer of the year 1838, by the members of the Botanical Society of London, with observations on varieties of plants; he notes a variety of the *Orchis morio*, having beautifully delicate fawn-coloured flowers, and concludes that it is exceedingly rare. Six concise Reviews introduce the Short Communications, and these have the titles—Mr. Eyton's arrangement of the gulls; Dr. Weissenborn on the *Gypaëtos barbatus* of immense size, shot during the last autumn, and probably the destroyer of two children; flight of pigeons at the rate of eight hundred and sixty feet in a minute, and to the extent of three hundred and twenty geographical miles; jealousy of a dog; new hot spring at Carlsbad containing both bromine and iodine; hybernation of the marmot; extract of a letter from Java, on collecting the nests of *Hirundo esculenta*; and a note on the lake of Arendsee, which throws out yellow amber, and petrifications of wood and other substances.

XXIII.—This, for November, commences with a second portion of Dr. Drummond's notices of Irish Entozoa; and, on the present occasion, he treats of the *Tetrarhynchus grossus*, *T. solidus*, a species newly described by the doctor, and the *Bothriocephalus punctatus*, which possesses four *bothria* instead of two only, as is generally supposed: the descriptions are clear and

full: they are accompanied with eleven illustrative figures. Mr. Garner begins a memoir on the anatomy of the Lamellibranchiate Conchiferous animals: this article appears favourable to Mr. G.'s talent for observation and his acquaintance with the philosophy of natural history. Mr. Von Meyer's recent researches in Fossil Zoology relate, in continuation, to the *Ascotus longimanus*, *Chalydra murchisonii*, *Lagomys oningensis*, *Palaeotherium ichnigii*, *Rhinoceros incisivus*, *tichorhinus*, and *goldfussi*, *Mastodon angustidens* and *turicense*, *Chalicomys jugerii* and *minutus*, *Oxygothorium escheri*, *Microtherium rengen*, *Emys heischeri*, *Cheropotamus meissneri*, *Dinotherium bavarium*, and *giganteum*, *Manutus studeri*, *Harpagon maximus* and the *Testudo anti-gua*: in a projected work on Fossil Zoology, the author illustrates these and his other "examinations" with figures executed on a new plan, allowing of their being measured without the compass. You now arrive at No. III of Mr. Blyth's analytic descriptions of the groups of birds composing the order *Streptopores*, and here he treats of the *Buceroides* or hornbill and hoopoe tribes. The first of these "tribal families" he denominates the *Appendirostres*, from their having beaks furnished with an appendage; the other, he names *Arcustirostres*, from their bills being slightly arcuated. Mr. B.'s remarks are evidently deduced from close and extensive observation, and they communicate much useful knowledge concerning the physiology and habits of the buceroidal birds. Mr. Westwood illustrates his curious experimental notes on the natural history of *Myrmeleon formicarium*, the ant lion, with a figure, which represents the larva of this ingenious creature working its way into sand. In a communication on the artificial arrangement of some of the more extensive natural orders of British plants, Mr. Bird exhibits "tabular analyses of genera, in which many of the more obscure features are disregarded, and the name of the genus arrived at without having recourse to minute dissection or indefinite characters:" experience will determine the practicability of Mr. Bird's scheme; it possesses the advantage of being simple, and holds out the fairest prospects of being convenient and useful for facilitating the investigations of young botanists. Mr. Wright addresses observations on a rare British dolphin, to the editor: this was the *Delphinus tursio*, shot off Torquay in September of the present year: minute descriptions of the stuffed specimen convey good representations of its size and relative proportions. A few British plants are noted by Mr. Luxford: he speaks of the *Teesdalia nudicaulis*, *Lycopodium selago*, *L. inundatum*, *Dianthus oaryophyllus*, *Phyteuma orbiculare*, *Campanula glomerata*, *Parnassia palustris*, *Statice spathulata*, *Crithmum maritimum*, *Ajuga chamaepelys*, *Althaea hirsuta*, *Arenaria peploides*, *A. marina*, *A. serpyllifolia*, *A. trinervis*, *A. ciliata*, *A. verna*, *A. rubella*, *Orchis maculata*, *O. pyramidalis*, *O. fusca*, *O. latifolia*, *Ophrys apifera*, *Liparis laeseii*, *Gymnadenia conopsea*, *Silene anglica*, *Centaurea solstitialis*, *Calluna vulgaris*, *Erica tetralix*, *Alchemilla alpina*, *Potentilla argentea*. Mr. L.'s notes have some value, but they display little appearance of being imparted in a generous spirit. Dr. Weissenborn "returns once more to the subject of Spontaneous Generation," in a belligerent article, and this is followed by another of the same kind, about "an undescribable muscle in the eyes of fishes." After two reviews and two brief notices of works published in periodical parts, the short communications close the *November*; and these concern the *pied fly-catcher*, shot at Mount Edgecumbe; the *northern diver*, killed near Plymouth; and the *secale cornutum*,

with the laws lately instituted in Germany for the prevention of its poisonous effects.

Annals of Natural History; or Magazines of Zoology, Botany, and Geology, conducted by Sir W. Jardine, Bart. P. J. Selby, Esq. Dr. Johnston, Sir W. J. Hooker, and Richard Taylor, F.L.S. 8vo, London, 1838, with graphic illustrations.

No. VIII, OCTOBER.—Observations on *Otaria falklandica*, the fur-seal of commerce, are made the subject of a very curious and important article from the pen of Mr. R. Hamilton. He premises a few notices on the history of the South Sea seal trade, on the furs of seals, and on the particular animal which yields the fur seal skin of the traders. Next, he characterizes this creature and adjoins the measurements of two specimens; and then, with some particulars regarding its habits, he gives a natural history of the Falkland otary sufficiently well calculated to excite the attention alike of merchants and philosophers. His observations are illustrated by an excellent figure. In a lively sketch, Mr. Forster shows distinctly that the *Ononis asquorum* of Linnaeus is the common *Restiarrow* which so beautifully adorns our heaths. Mr. Fries separates the genus *Syngnathus* into two sub-divisions, to which he applies their Swedish provincial names—*Tangsnallor*, the marsupial pipe-fish, and *Hafsnalar*, the ophidial pipe-fish: he next enumerates eight general peculiarities of the fishes, and then distinguishes the three native Swedish species, *Syngnathus aquoreus*, the equoreal pipe-fish; *S. ephidion*, the common pipe-fish; and *S. lumbriciformis*, the little pipe-fish; by their proper zoological characters. Mr. Bentham contributes an enumeration of the plants collected in British Guiana by Mr. Schomburgk, the indefatigable botanical traveller. His list comprises thirty-six species, including some belonging to a French collection. Under the tribe VERNONIACEÆ, he specifies *Sparganophorus vaillantii*, *Vernonia odoratissima*, *V. scorpioides*, *V. tricholepis* and *microcephala*, *Centratherum muticum*, *Elephantopus carolinianus*, *Elephantosis angustifolia*, *Trichospira menthoides*, and *Pectis elongata*.—Eleven species are EUPATORIACEÆ; namely, *Oëclinium villosum*, *O. clavatum*, *Eupatorium subvelutinum*, *E. comyzoides*, *E. subobtusum*, *E. irodes*, *Mikania racemulosa*, *M. hookeriana*, *M. denticulata*, *M. convolvulacea*, and *M. parkeriana*. The tribe ASTEROIDEÆ has belonging to it, *Baccharis leptcephala*, and *Eclipta erecta*. There are fourteen SENECEIONIDEÆ, being *Riencourtia glomerata*, *Latreillea glabrata*, *Clibadium asperum*, *C. erosum*, *Unxia camphorata*, *U. hirsuta*, *Acanthospermum santhoides*, *Wedelia scaberrima*, *W. discoides*, *Wulfia platyglossa*, *Bidens bipinnata*, *Cosmos caudatus*, *Schomburgkia** *cal-*

* "Mr. Robert Schomburgk was, in the year 1834, appointed by the Royal Geographical Society to command an expedition into the interior of British Guiana, with permission at the same time to make collections, on his own account, in the various branches of natural history, one set being deposited in the British Museum. Having procured a certain number of subscribers to the dried plants which he should collect, it was further arranged that Mr. S. should make them up in sets, and forward them to Mr. Bentham for transmission to the subscribers, and that each species should be marked with correspond-

oides, *Gnaphalium americanum*. In a continuation of Drs. Wight and Arnott's illustrations of Indian botany, the *Acalypha ciliata* is largely characterized and beautifully figured. Mr. Haliday particularizes the new British insects indicated in Mr. Curtis's "Guide." Among these are two *coleopters*—the *Calanthus nubigena* and *Omasus tetricus*. The hymenopters are forty-nine in number—Ichneumon *phaleratus*, Tryphon *hamosternus*, *T. curtisi*, *T. aurifluus*, *T. phæorrhæus*, *Exochus antiquus*, *E. lictor*, *E. pectoralis*, *E. talpa*, *Periope auscultator*, *Cryptus atricilla*, *C. fulgurans*, *C. olerum*, *C. sylvarum*, *C. complanatus*, *C. arenarius*, *C. fulvicornis*, *C. cruentatus*, *C. varius*, *C. prator*, *C. comes*, *C. socius*, *C. paganus*, *Pimpla senator*, *P. phanica*, *P. madida*, *P. degener*, *Basus serricornis*, *B. laricia*, *Porizon linguarius*, *Atractodes incesor*, *A. diognæus*, *A. scrutator*, *A. vestalis*, *A. gravidus*, *A. albo-vinctus*, *A. arator*, *A. salicis*, *B. exilis*, *A. croceicornis*, *A. bicolor*, *A. piceicornis*, *A. fumatus*, *A. cellator*, *A. citator*, *A. properator*, *Lampronota fracticornis*, *L. crenicornis*, and *L. denticornis*. Mr. H. proposes to indicate the British species in the Cynipidæ, Proctotrupidæ, Diapriidæ, and Ceraphronidæ, in a separate memoir on those families. Professor Ehrenberg's communication, respecting fossil and recent Infusoria, is accompanied with three ideal figures of the *Loxodes bursaria*, in various states of the extension of the alimentary canal. In an additional portion of his specimen of the botany of the New Zealand islands, Mr. Cunningham describes the characters and habitates of *Scorzonera scopigera*, *Sonchus oleraceus*, *Picris hieracioides*, *P. attenuata*, *Shawia paniculata*, *Solidago arboreasens*, *Lagenophora forsteri*, *L. lanata*, *Aster helosericeus*, *A. coriaceus*, *Haxtonia furfuracea*, *Vittacelinia australis*, *Bidens pilosa*, *Cotula coronopifolia*, *Myriogyne minula*, *Soliva tenella*, *Craspedia uniflora*, *Cassinia leptophylla*, *Ozothamnus pinifolia*, *Helichrysum bellidioides*, *Gnaphalium luteo-album*, *G. simplex*, *G. lanatum*, *G. involucreatum*, *G. kerriense*, *G. trinerve*, *Arnica operina*, *Senecio laetus*, *S. australis*, *S. neglectus*, *S. argutus*, *S. quadridentata*, *S. hispidulus*, *Brachyglottis repanda*, *B. rotundifolia*, and *B. rani*, which makes the 465th article in Mr. C.'s curious and interesting catalogue. Four "bibliographical notices" bring you to the "proceedings of learned societies." At the Edinburgh "Botanical," papers were read by Mr. Forbes on the Primulæ, where he contends that there are only two species, the *P. acaulis* and *P. veris*, the *P. elatior* being "not only not a hybrid, but a non-existence;" by Professor Christison on the preservation of fruits and botanical specimens in the moist state; and, after numerous experiments made for a series of years, he concludes that no fluid preserves both the consistence and colour of fruits, leaves, and flowers, so well as a concentrated solution of common salt; by Mr. Macaulay on the influence of vegetation on the composition of the atmosphere, evincing experimentally that different natural families produce such effects in different degrees: by Mr. Carpenter, containing a general view of the function of reproduction in vegetables, and showing that the reproductive system can be traced with increasing complexity, but without alteration of its essential characters, from the lowest cryptogamic tribe to the

ing numbers in the several sets, with a view to identifying them when published." With a kind and just regard for Mr. S.'s interests, as his losses have been very severe, owing chiefly to repeated attacks of fever, Mr. B. states that several sets of five hundred each remain undisposed of; and we cordially join with him in recommending them to the favourable consideration of naturalists.

most perfectly organized flowering plants: and by Mr. Brand on the proper mode of arranging the Society's Herbarium and forming a catalogue for reference; his scheme is most ingenious, and comprises objects and principles which met with general approbation. At the "Zoological," a new species of *Perameles* was exhibited by Mr. Gray, who proposed to name it the *P. gunnii*, in honour of its discoverer. In a letter from Captain Harris at the Cape, he relates his discovery of a new species of antelope: it is denominated *Aigocerus niger*, the sable antelope, and its measurements and characters are described. Mr. Ogilby characterized the *Macroscelides alexandri*, *M. melanotis*, *Chrysochloris damarensis*, *Bathyergus damarensis*, and *Graphiurus elegans*, as new mammalia, and then distinguished certain peculiarities in the structure of the hand, in a living Galaga: it is a new species, and he wished it to be called the *Otocicnus garnettii*, in honour of the gentleman who enabled him to make the description. Mr. Owen's outline of the comparative anatomy and zoological relations of the Nubian Giraffe, founded on dissections of one female and two males, is an elaborate, perspicuous, and exceedingly instructive document. Mr. Martin exhibited an "insectivorous animal" to the society: he established a new genus for its reception, and characterized it under the generic appellation of *Echinops*, with the specific title of *E. telfairi* in memory of a lamented and zealous corresponding member. Mr. M.'s characterology seems comprehensive and accurate. *Sokinah* is this creature's Malabarian name. A new species of swan was shown by Mr. Yarrell, who denominated it *Cygnus immutabilis*, with reference to the unchangeable colour of its plumage. A list is given of the communications laid before the section of zoology and botany at the last meeting of the British Association, and some of these, or authentic extracts, are promised to appear in future numbers of the *Annals*. The miscellanies relate to two magnificent works on the Orchidaceous plants; to collections of Scottish and American mosses; to the *Panopæa australis*, its internal and external organization; to the *Odyneri*, their metamorphoses and industry; to the *Lestris parasiticus*, shot in the county of Durham; to the occurrence of copper in plants; and to the *Falco islandicus*, shot in Yorkshire: this instance and another previously known are held sufficient for assigning to this bird a place in British Ornithology. "October" terminates with the usual tables of meteorological observations.

IX.—Setting out with a note from Prof. Ehrenberg on the organic origin of the potstones or *Paramoudras* of Whittingham, this number has for a second article, an admirable memoir by Capt. Cook on the genera *Pinus* and *Abies*, with remarks on the cultivation of some species: the captain's observations are most important, with reference alike to science and to silvan economy, and his suggestions offer high claims to the attention of forest-owners, wood-merchants, and governments. Two letters from Capt. DuCane convey much curious information relating to the metamorphoses of *Palæmon variabilis*, the ditch prawn, and *Crangon vulgaris*, the common shrimp, and his account of the remarkable changes which these creatures undergo in passing through their successive states, is illustrated by twelve finely lithographic figures. In notes on *Vespertilio leisleri*, the hairy-armed bat, Mr. Paine distinguishes the animal by zoological characters, and he concludes that its occurrence in the eastern part of Norfolk is not so rare as has been represented. Resuming his descriptions of the new British insects indicated in Mr. Cur-

tis' Guide, Mr. Haliday begins with the dipterous tribe: *Culex detritus*, *C. fulvicola*, *Lela nasuta*, *Limnobia ayle*, *Spania fallenii*, *Medeterus ruficornis*, *Dolichopus sabinus*, *D. signifer*, *Platypeza infumata*, *Musca morellia importuna et hortorum*, *Anthomyia monilis*, *A. cilipes*, *Scatophaga fuvorum*, *S. maritima*, *Cœlopa pilipes*, *C. frigida*, *C. simplex*, *C. sciomyzina*, *Saltella stellata*, *Sepsis duplicata*, *Tephritis duplicata*, *T. asteris*, *T. pini*, *Oscinis capreolus*, *O. rapte*, *Helomyza arenaria*, *Sciomyza virgata*, *Ochthipila flavipalpis*, *O. geniculata*, *Heteroneura flava*, *Opomyza illota*, *Diastata glabra*, *Sphærocera sobricula* and *Limosina arcuata*. Mr. H.'s hemipters are, *Atheroides serratulus*, *A. hirtellus* and *Eriosoma pallida*, which inhabits the leaves of the mountain-elm. Dr. Meyen's note, contributing the results of experiment, on the formation of the fibrous cells or tubes in the liber of plants, appears in an English version: it precedes a communication from Mr. Reade on some new organic remains in the chalk-flints; this is illustrated with two accurately finished plates, containing twenty-eight figures of scales of fishes not named, and eight of scales of the white-bait, grayling, carp, barbel, red gurnard, grey mullet, gudgeon, and dace; and with figures of nine infusoria—*Xanthidium furcatum*, *X. crassipes*, *X. hirsutum*, *X. ramosum*, and *X. tubiferum*, with three varieties or duplicates—all discernible by the microscope in the flints of chalks: in these, also, very fine examples of coniferous wood sometimes occur. Mr. R. concludes his sketch with the beautifully impressive and well-timed remark—here, he says, "I close this account of an investigation which no right-minded man will prosecute without directing his thoughts to Him who of old turned the hard rock into a standing water, and the flint-stone into a springing well." Mr. Walker furnishes an addition to his descriptions of British Chalcidites, and distinguishes the *Cirr. aretios* and three varieties, *C. acutus*, with seven varieties, *C. armatus* and six varieties, *C. metus*, *C. eurytus*, *C. mandarius*, *C. anysis* with five varieties, *C. eous* and five varieties and *C. euodechus* with one variety: the characters are defined with particular minuteness and precision. An additional portion of Mr. Cunningham's specimen of the Botany of the New Zealand islands embraces his phytographical characters of *Opercularia diphylla*, *O. aspera*, *Galium tenuicaule*, *G. propinquum*, *Coprosma lucida*, *C. fetidissima*, *C. propinqua*, *C. rotundifolia*, *C. rhamnoides*, *C. gracilis*, *C. divaricata*, *C. acerosa*, *C. repens*, *C. spatulata*, *Ronabea australis*, *Nertera depressa*, *Geophila dichondrafolia*, *Viscum antarcticum*, *V. pubigerum*, *V. salis cornoides*, *Loranthus tetrapetalus*, *Alseuosmia linariifolia*, *A. ligustrifolia*, *A. banksia*, *A. palaisiformis*, *A. atriplicifolia*, *A. iles*, *A. quercifolia*, *A. macrophylla*,—the *Alseuosmia* is a new genus, and its generic characters are amply delineated,—*Hydrocotyle elongata*, *H. microphylla*, *H. novæ seelandiæ*, *A. dichondrafolia*, *H. heteromeria*, *H. compacta*, *H. moschata*, *H. asiatica*, *Petroselinum prostratum*, *P. filiforme*, *Ligusticum aciphylla*, *L. gingidium*, *Peucedanum geniculatum*, *Apium graveolens*, *Panax simplex*, *P. arboreum*, *Cussonia lessoni*, *Polyscias pinnata*, *Aralia schefflera* and *A. crassifolia*, making the 514th article in Mr. C.'s curious and valuable list. Three "bibliographical notices" conduct you agreeably to the "proceedings of learned societies," and the first of these is the "Zoological." At this, a new species of squirrel was exhibited by Mr. Waterhouse, who named it *Sciurus sublineatus*, giving its distinctive characters. Mr. Blyth defined a hitherto-unnoticed peculiarity in the structure of the feet in the Trogonidae, and Mr. Owen continued his excellent essay on the anatomy of the Giraffe, compris-

ing the principal features of the animal's osteological peculiarities. Mr. Bibron made observations upon two species of Triton—the *cristatus* and *mar-moratus*—which are indigenous to this country. Under the appellation of *Macropus rufescens*, Mr. Ogilby exhibited a specimen of the Tasmanian *vellabae*, a new species of kangaroo, whose specific characters he enumerated. Mr. Waterhouse showed a drawing, and the tail and jaws, of a new species of Delphinus, which he called the *D. fitzroyi*, adding a description, admeasurements, habitate of the fish, and a few explanatory remarks. Two species of the *Ptilotis* were produced by Mr. Gould, and he characterized them as the *P. ornata* and *P. flavigula*, with notes of their habitates. In a letter, Mr. Van der Hoeven expressed his belief that the large salamander preserved in a living state at Leyden, ought to be regarded as a species of *Menopsoma*, instead of which he proposes to adopt the generic term *Cryptobranchus* and the specific name *japonicus*. On this opinion, Mr. Owen offered very pertinent observations, and then Mr. Ogilby displayed a drawing of a *Marsupian* from the interior of New South Wales, which he was induced to suspect might become the type of a new genus: he proposed to name it *Chæropus* provisionally, with allusion to the characters of its fore feet. At the "Botanical," a communication of Mr. Schomburgk's was read on the *Bertholletia excelsa*, accompanied with drawings of the plant in different stages of its growth: a peculiarity in its seed-vessel was noticed by Mr. Gray, and his remark led to some discussion. Mr. Cooper contributed notes on a large variety of the *Ranunculus flammula*, and he then related the particulars of the society's first botanical excursion: to the next meeting, he communicated observations on a new principle of Fencing according to the laws of vegetable physiology: his plan consists in planting trees of the same kind and causing them to unite by the process of grafting by approach or inarching, and thus to form a natural living fence. The Miscellanies include Sketches entitled—*Cardamine sylvatica*, a British plant; the *Gypaëtos hemachlanus*, "a distinct species, new to science," and a habitant of the Himalayan mountains; the *Nasturtium anceps*; the action of free carbonic acid on the nutrition of plants; hybridity of ferns; affinities of the *Ceratophyllaceae* vegetables; litter of the *Hyæna vulgaris*, and the time of gestation; the *Myrmecobius fasciatus*, an insectivorous animal, referred as a new genus to the monodelphian mammiferous tribe; caoutchouc in the *Apoqueal*, *Asclepiadeal*, *Camp-nulaceae*, *Sobeliaceae*, *Chicoraceae*, *Euphorbiaceae*, and other orders of plants; death of Mr. Frederic Cuvier; meteorological observations.

The London and Edinburgh Philosophical Magazine and Journal of Science; conducted by Sir David Brewster, F.R.S. Richard Taylor, F.G.S. and Richard Phillips, F.R.S. 8vo, London, 1838.

OCTOBER.—Mr. Draper's remarks on the constitution of the atmosphere, form a long, experimental, and important article, with illustrative diagrams. Notes on shooting stars, by M. Quetelet of Brussels and Dr. Robinson of Armagh, present some interesting particulars. Dr. Schœnbein's conjectural observations on the cause of the peculiar condition of iron, are ingenious, and merit the consideration of chemical experimentalists; and the same may

justly be said of Dr. Apjohn's account of his experiments for determining the specific heats of the more remarkable gaseous bodies: the professor's views are sustained by extensive calculations. In a remark on an article of M. Poisson's *Traité de Mécanique*, Mr. Ivory undertakes to demonstrate the theorem—"if an interior level surface be extended through the mass, the body of fluid within the level surface will be in equilibrium independently of the rest of the mass, and supposing the incumbent fluid were removed." In a continuation of his paper on some of the phenomena and laws of action of voltaic electricity, Mr. Binks presents his general inferences deduced from an examination of the results furnished by his diagram and previous tables. In the eleventh series of his experimental researches in electricity, Dr. Faraday takes for subjects—induction an action of contiguous particles, absolute charge of matter, electrometer and inductive apparatus, induction in curved lines, specific inductive capacity, and general results as to induction: these researches will deservedly be referred to as authority; they are now extended to the 1214th section. As a proceeding of the geological society, you find the conclusion of Mr. Sedgwick's synopsis of the English series of stratified rocks inferior to the old red sandstone, with an attempt to determine the successive natural groupes and formations. Standing as miscellanies, synaptasin the principle of almonds, composition of the blood, the iodide of amidin, new compound of sulphate of magnesia and water, chlorethral or "chloral of ether," formio-benzoic acid, proportions of gluten in grain, oxide of phosphorus, the sexborate and rhombic baborate of potash, cyanide of gold, are all noticed with more or less copiousness: and then *October* concludes with meteorological observations.

NOVEMBER.—Mr. Ivory introduces this month with observations on a principle laid down by Clairault for determining the figure of equilibrium of a fluid, the particles of which are urged by accelerating forces. A communication then comes from Mr. Johnston on a new compound of sulphate of lime with water: this paper is illustrated by a table exhibiting the formulæ of all the known sulphates, hydrated and anhydrous, of the magnesian class of oxides. The same writer furnishes another of his articles on the composition of certain mineral substances of organic origin: he now treats of Guayaquillite and the guayaquillite of silver. Mr. Laming brings forward the second part of his inquiry on the primary forces of electricity, and Dr. Apjohn concludes his paper on the specific heats of the gases. A chemical analysis of meteoric iron is taken from an American journal of science, and the writer concludes that "our specimen is of celestial origin, and that it is a fragment of one of those asteroïdes of cometary matter which, wandering in space, occasionally cross our orbit, and, being attracted by the earth, so that they rush through our atmosphere, bursting into fire and descending, take up their abode on this sublunary sphere." Dr. Faraday continues the eleventh series of his experimental researches in electricity, with diagrammatic illustrations; and in a further justification of the contact theory of galvanism, Mr. Fechner treats of facts which relate to the closed circuit, and of the development of electricity by the contact of metals and fluids. Mr. Bird's observations on some peculiar properties acquired by plates of platina which have been used as the electrodes of a voltaic battery, conduct us to the proceedings of learned societies. At the "Geological," there were communications from—the Marquis of Northampton on spiroïtes in chalk and

chalk-flints; Mr. Taylor on the quicksilver ores of San Onofré in Mexico; Mr. Edmonds on the obsidian of Real del Monté; Mr. Murchison on the Our's Rock as an indication of the protrusion of strata at that point; Dr. Buckland on the discovery of fossil fishes in the Bagshot-sands, and of a fossil wing of a neuropterous insect in the Stonefield-slate; and Mr. Stokes on some species of Orthocerata, and certain considerations respecting the relations of the shells to the animals to which they belonged. The twenty-fifth annual report of the Royal Geological Society of Cornwall comes next, and then the miscellanies, extracted chiefly from the French and German journals. From the former, we have notes on the tungstate of tungsten and potash, on the stearopten of turpentine, on the pectates of silver, of lead, and of copper: from the latter are derived articles bearing the titles—reagent for the detection of sulphurous acid in the hydrochloric acid of commerce; processes for preparing lithia; new double salt of zinc and potassium; reagent for nitric acid and nitrogen; formate of soda as a reducing substance for arsenic; the transparency of carbon; preparation of arseniuretted hydrogen. Analyses of serum of blood drawn from a diabetic patient, and of the liquor amnii, are selected from the Guy's Hospital Reports, recently published; and, with meteorological observations, the present number is concluded.

The Phrenological Journal and Magazine of Moral Science; 8vo, London and Edinburgh, 1838.

No. LVIII.—For the first articles of this Number, are strictures on anti-phrenology in two letters to Macvey Napier, Esq. and P. M. Roget, M.D. being an exposure of the article called "phrenology" recently published in the *Encyclopædia Britannica*. The *first* of these spirited and beautifully logical epistles exhibits "Macvey Napier, Esquire," as a crouching drone greatly inclined to unfairness and sycophancy: it is impossible to peruse the *second*, without experiencing amazement at the extraordinary ignorance and flagrant dishonesty manifested in Dr. Roget's pseudologies concerning the new science of mind; the evidences here adduced in demonstration of their profligacy, are complete. Next in course to these most instructive communications, comes an account of the establishment of a "Phrenological Association," based on the general resolution that "phrenology being a highly useful and important branch of philosophy, it is desirable to obtain for it, in the public mind, as much respect and consideration as possible: the report includes very judicious practical remarks on the objects and economy of philosophical institutions. As a fourth contribution, you have a powerful and successful essay to show that phrenology is supported by scientific men; and this is appropriately followed by a letter from a Bohemian count representing the progress of phrenology in Germany. Among the "cases and facts," the first is a communication from Mr. Combe on the size of Sir Walter Scott's brain, and the phrenological development indicated by his bust: here, the facts evince to a demonstration that Scott's "head was really large;" that it was very large in the lower and middle regions of the forehead; that the lower region of the hind head was large; that the coro-

nal region rose to an unusual height; that, at the organ of veneration it was the highest head Mr. C. ever beheld; and that, at the organs of benevolence, imitation, and wonder, it had few equals; every admirer of Scott's writings, and every lover of nature and truth, will peruse this extraordinary document with intense attention, surprise and instruction. From this you pass on to "phrenological exercises," which are admirably adapted to fulfil their author's intention; then you reach Dr. Verity's notes on the development indicated by the antique busts in the collections of Naples, Rome and Florence: the doctor's subjects are Socrates, Seneca, Zeno, Aristides, Archimedes, Tiberius, Vespasian, Titus and Vespasian; and then you arrive successively at three short papers having the titles—singular hallucination of a popular clergyman, who imagined that Almighty God, by a singular instance of divine power, had gradually annihilated in him the thinking principle and utterly divested him of consciousness; case of pain in the organ of philoprogenitiveness in the head of a lady who witnessed an accident happen to her child; and an anomalous case of nervous affection, apparently induced by sudden excitement in the organ of cautiousness. In an article most remarkably interesting, whether phrenologically or forensically considered, Mr. Simpson proves the identity of Eugene Aram's skull, and he declares on the clearest evidence that it contained the brain of a selfish, violent and dangerous person, who was, at the same time, cunning, cautious, and dishonest, without moral control, with a limited intellect, but having some taste and even a touch of poetical feeling: he, therefore, concludes that it bears out the perfect indications of all that is known of that extraordinary individual's character. Beyond the notices of books, which are four in number, the two first of which are valuable and instructive, you find intelligence concerning the Glasgow, Aberdeen, Blackburn and Dundee phrenological societies, the phrenological class at the London and the Westminster mechanics' institutions, Mr. Combe's proceedings in America, and a variety of miscellaneous information. In the introduction to his "Library Table," as the third "notice of books" is designated, the Editor vainly preponds "*three points*," alike ill-timed and untenable; but besides this exception, his fifty-eighth publication contains many essential contributions to the progress of mental philosophy.

"*." *The outlines of other periodicals have unavoidably been omitted for want of space.*

BOOKS RECEIVED.

THE London and Edinburgh Philosophical Magazine for October, November, and December.

The Annals of Natural History for the same months.

The Magazine of Natural History for the same months.

The Naturalist for October and November.

The Phrenological Journal, No. LVIII, for January.

Microscopic Illustrations, with plates, by Mr. Pritchard.

Geology of England and Wales, with a map.

Egypt as it is in 1838, by Waghorn.

Scheme of the Courses of Education in the Grammar School of Glasgow, by Mr. Dorsey.

Annual Report of the Birmingham Philosophical Institution.

Proceedings of the Literary and Scientific Society at Staines.

ERRATA IN No. 25.

Page 2, lines 5 and 26, for Burten read Buxton.

Page 5, line 18, for Burton read Buxton.

Page 9, line 9, for cupping read capping.

Page 12, line 24, for wood read road.

Page 12, line 39, for engrossing read exposing.

Page 14, *note*, for trading and trades read hading and hades.

Page 37, line 14, for increase read decrease.

Page 37, line 20, for Cerilhium read Cerithium.

METEOROLOGICAL REPORT.—AUGUST.

Philosophical Institution, Birmingham.

Ave.	9 o'clk. a.m.		3 o'clk. p.m.		Dew Point, deg. Fah. 9 a.m. 3 p.m.	External Thermometers. Fahrenheit. 9 a.m. 3 p.m.		Self-register. Lvt. Htkt. 9 a.m. 3 p.m.		Rain in Inches. read off of wind at 9 a.m.	Direction 9 a.m.	Remarks.
	Bar.	Ther.	Bar.	Ther.		9 a.m.	3 p.m.	9 a.m.	3 p.m.			
1	29.5	61.0	29.51	64.5	56.0	58.0	65.0	48.0	65.5	.200	S.	Fair a.m.; rain p.m. Overcast all day.
2	29.36	64.0	29.31	69.0	61.0	60.5	63.0	69.0	67.0	.060	S.	Cloudy, with showers.
3	29.2	69.0	29.23	69.5	59.0	59.0	60.0	67.0	68.5	.060	S.S.W.	Overcast, but fair.
4	29.16	65.0	29.1	70.0	60.0	61.5	61.0	67.5	68.0	.060	S.S.E.	Showers; a brisk S. wind, greatest force 4 lbs.
5	29.06	64.0	29.03	71.0	58.0	59.0	64.5	61.0	66.0	.200	S.	Heavy showers; a brisk wind from the S.W., greatest force 4 lbs.
6	28.96	64.0	29.0	70.0	57.5	56.0	67.5	63.5	64.0	.175	W.	Overcast, but fair; rain during the night.
7	29.19	69.0	29.29	69.5	53.5	56.5	61.0	59.0	62.0	.030	W.N.W.	Overcast all day.
8	29.27	61.0	29.62	62.0	54.0	51.0	55.0	59.5	61.0	.075	S.	Showers a.m.; clouded p.m. Overcast; a brisk wind from the S.W., greatest force 5 lbs., at 4 bef. 3 p.m.
9	29.64	60.0	29.61	60.0	54.0	56.0	60.0	60.0	61.0	.075	S.S.W.	Very fair a.m.; overcast p.m.
10	29.48	63.0	29.5	67.0	61.0	61.5	64.0	68.0	69.0	.090	S.S.W.	Overcast, ending in continued mizzling rain.
11	29.54	66.0	29.55	71.0	62.0	64.5	68.0	70.5	71.5	.090	W.S.W.	Very fair.
12	29.57	68.0	29.57	68.5	62.0	64.0	65.0	64.5	66.0	.090	W.	Overcast, but fair.
13	29.59	65.0	29.63	70.0	50.0	51.5	63.0	64.5	66.0	.090	N.W.	Overcast a.m.; rain p.m.
14	29.73	61.5	29.71	70.0	49.5	50.5	60.0	65.5	66.0	.035	E.	Fair, but occasionally overcast.
15	29.66	61.5	29.66	65.0	53.0	52.0	58.0	64.0	65.0	.210	S.	Overcast; heavy rain about noon.
16	29.62	58.0	29.62	66.5	49.5	51.5	56.0	62.5	63.5	.060	S.S.W.	Fair a.m.; showers p.m.; a brisk wind from the S.W., max. force 9 lbs., at 4 hours p.m.
17	29.71	60.0	29.69	61.0	53.5	56.0	60.0	67.0	68.0	.090	S.	Showers; much wind from the S.W., max. force 6 lbs. square foot, 10 a.m.
18	29.71	62.0	29.71	67.0	58.0	61.0	60.0	63.0	65.0	.185	W.	Overcast, showers; a gale from S.W., max. force 6 lbs. square foot, 10 a.m.
19	29.45	65.0	29.36	73.0	59.0	58.5	60.0	63.0	65.0	.180	W.	Overcast, but fair.
20	29.28	63.0	29.14	67.0	57.5	55.0	58.0	63.0	64.0	.110	S.E.	A fine morning; rain from about half-past 11 a.m. nearly all day.
21	28.75	61.0	28.8	67.0	54.0	53.0	59.0	63.0	64.0	.010	S.	Very fair.
22	28.62	59.5	28.66	63.0	50.0	56.0	54.0	59.0	60.0	.010	N.	Overcast, but fair.
23	29.0	58.5	29.16	62.0	53.0	59.5	55.0	60.0	61.0	.010	W.S.W.	Overcast, but fair.
24	29.46	57.5	29.51	59.0	52.0	53.0	54.0	57.0	58.0	.010	W.S.W.	Overcast nearly all day.
25	29.54	57.5	29.51	58.0	52.0	55.0	55.0	55.0	56.0	.010	W.S.W.	Overcast nearly all day.
26	29.6	58.5	29.6	77.0	53.5	55.5	58.0	68.0	68.5	.010	W.S.W.	Overcast nearly all day.
27	29.61	64.5	29.63	72.0	60.0	64.5	67.0	77.0	78.0	.010	W.S.W.	Overcast nearly all day.
28	29.66	63.5	29.57	63.0	51.5	54.0	63.0	66.0	67.0	.010	W.S.W.	Overcast nearly all day.
29	29.46	63.5	29.57	63.0	51.5	54.0	63.0	66.0	67.0	.010	W.S.W.	Overcast nearly all day.
30	29.67	59.0	29.66	62.5	46.5	51.0	53.0	63.5	65.0	.010	W.S.W.	Overcast nearly all day.
31	29.67	59.0	29.63	63.5	55.0	52.0	56.5	66.0	66.0	.010	W.S.W.	Overcast nearly all day.
Mean	29.49	62.1	2.942	66.54	56.54	56.33	63.76	63.26	65.17	1.910	Sum.	

Barometer. 9 a.m. 29.49 3 p.m. 29.49
Thermometer. 9 a.m. 56.54 3 p.m. 65.17
Height of the cistern of the barometer above the ground, 23 ft. 6 in.
Height of the cistern of the barometer above the presumed mean level of the sea, 473 ft. 6 in.
Height of the external thermometers above the ground—Fah. 46° 61° Salf. 46° 46° 61°

SEPTEMBER.

Serr.	9 o'clock a.m.		3 o'clock p.m.		Dew Point, deg. of Fah. 9 a.m. 8 p.m.	External Thermometers.		Rain in Inches, read off 9 a.m.	Direction of Wind at 9 a.m.	Remarks.		
	Bar.	Alcohol. Ther.	Bar.	Alcohol. Ther.		Fahrenheit. 9 a.m. 8 p.m.	Self-regist. Lever. Hyet.					
1	29.58	61.0	29.58	62.5	61.0	52.0	58.0	61.5	53.0	62.0	S. W.	Overcast all day; a slight deposition at night.
2	29.62	60.0	29.65	62.0	60.5	51.5	60.0	63.0	52.0	66.0	S.S.W.	Very fair.
3	29.65	59.5	29.62	62.0	62.0	57.0	68.0	62.5	51.0	63.0	S.	Very fair.
4	29.5	60.0	29.38	68.5	64.0	52.0	66.0	63.5	48.5	64.0	S.E.	Fair, but overcast.
5	29.07	61.5	29.01	68.0	58.0	59.0	58.5	65.0	54.0	67.5	S.E.	Overcast, ending in rain.
6	28.78	62.5	28.76	71.0	57.0	57.5	57.0	62.0	54.0	64.0	S.S.E.	Overcast, with light showers.
7	28.84	61.5	28.89	61.0	56.0	57.0	56.0	55.0	53.0	66.0	N.N.E.	Clouded a.m.; showers p.m.
8	28.21	55.5	28.32	56.0	47.5	45.5	48.5	52.0	46.0	53.0	W.N.W.	Overcast, but fair.
9	29.68	54.0	29.72	60.0	41.0	43.5	50.0	56.0	45.0	57.0	S.W.	Fair, but occasionally clouded.
10	29.89	52.0	29.89	56.0	37.0	45.0	50.0	56.5	41.0	57.0	W.N.W.	Very fair.
11	30.0	52.5	30.0	60.0	44.0	46.0	54.0	63.0	41.0	63.5	S.W.	Very fair.
12	29.95	57.0	29.9	61.0	51.0	52.0	56.0	62.0	47.5	63.0	S.	Fair, but overcast.
13	29.8	60.5	29.7	62.5	55.0	52.0	57.5	62.0	55.0	62.5	S.	Fair, but overcast.
14	29.52	61.0	29.6	62.0	56.0	59.0	57.0	63.0	54.5	66.0	S.S.E.	Overcast, but fair.
15	29.59	63.0	29.59	64.5	58.5	59.0	58.0	63.0	58.0	54.0	S.E.	Fair, but overcast.
16	29.6	63.0	29.58	68.0	59.0	57.0	60.0	67.5	53.0	58.5	N.	Very fair a.m.; overcast p.m.; a slight deposition at night.
17	29.6	62.0	29.6	63.5	57.0	58.0	57.0	60.0	53.0	62.0	N.E.	Overcast, but fair.
18	29.6	59.5	29.56	62.0	49.5	50.0	52.0	56.0	50.0	58.5	N.E.	Overcast, but fair.
19	29.48	58.0	29.45	60.0	52.0	55.0	52.0	56.0	49.0	57.0	E.S.E.	Overcast; rain at night.
20	29.33	57.0	29.34	64.0	51.0	50.0	55.0	56.0	49.5	60.0	S.S.W.	Very fair.
21	29.36	56.0	29.36	59.0	47.0	44.0	52.0	56.5	44.5	66.0	W.N.W.	Very fair.
22	29.46	54.5	29.44	60.0	49.0	50.0	60.0	62.0	40.5	60.0	S.S.E.	Very fair.
23	29.46	58.5	29.36	61.0	55.0	56.0	59.0	62.5	57.0	67.0	S.S.E.	Fair a.m.; rain p.m.
24	29.41	56.0	29.38	57.0	51.0	53.0	51.5	53.0	44.0	58.0	S.S.W.	Showery all day; heavy rain at night.
25	29.3	52.0	29.35	53.0	49.5	50.5	48.5	50.0	46.0	50.5	E.S.E.	Light continuous rain all day.
26	29.46	54.5	29.46	56.5	51.5	51.5	52.0	56.0	49.0	57.0	N.N.E.	Overcast; much rain at night.
27	29.43	54.0	29.42	56.5	51.0	52.5	51.0	56.0	48.0	56.5	N.N.E.	Overcast, but fair.
28	29.5	53.0	29.53	56.5	48.5	52.5	48.5	51.0	46.0	61.5	W.S.W.	Very fair.
29	29.54	55.0	29.54	58.5	53.0	56.0	55.0	62.0	46.0	63.5	S.W.	Overcast, but fair.
30	29.7	57.5	29.77	66.5	54.0	57.5	66.0	61.0	57.0	67.0	W.	Very fair.
Mean Sea. 49 57.43 29.49 61.30 61.56 52.58 5 4.97 59.80 49.13 61.30 1.086 Swm.												

Height of the datern of the barometer above the ground, 23ft. 6in.
Height of the cistem of barometer above the presumed mean level of the sea, 479ft. 6in.
Height of the external thermometer above the ground—Fah. 38ft., Self-reg., 38ft.
Height of the reometer of the rain-gauge above the ground, 38ft.

[38 feet.

Height of the cistern of the barometer above the ground, 28ft. 6in.
 Height of the external thermometer above the presumed mean level of the sea, 473ft. 6in.
 Height of the external thermometer above the ground, 38ft. 3in. Self-reg. 38ft.
 Height of the receiver of the rain-gauge above the ground, 38ft.

OCTOBER.

Oct.	9 o'clk, a.m.		3 o'clk, p.m.		Dew Point, deg. Fah. 9 a.m. 3 p.m.	External Thermometers.		Rain in Inches, read off 9 a.m.	Direction of Wind at 9 a.m.	Remarks.
	Bar.	Ther.	Bar.	Ther.		9 a.m. 3 p.m.	Lwt. Hbst.			
1	29.89	58.0	29.87	58.0	55.0	54.5	55.0		N.	Overcast, but fair.
2	29.92	57.0	29.92	56.0	52.0	53.5	59.0		N.	Very fair.
3	30.0	55.5	29.98	59.0	51.0	56.0	59.5		N.E.	Very fair.
4	29.95	53.0	29.43	56.5	48.5	50.0	61.0		N.N.E.	Very fair.
5	29.86	49.5	29.87	55.0	39.0	51.5	57.0		N.	Very fair.
6	29.9	51.0	29.9	53.0	43.0	53.0	62.0		N.N.E.	Overcast, but fair.
7	29.9	52.0	29.87	55.0	48.5	49.0	54.0		N.N.W.	Overcast; a slight deposition during the night.
8	29.89	53.5	29.89	54.0	44.5	50.0	52.0	.006	N.W.	Overcast, but fair.
9	29.89	53.0	29.86	54.0	48.5	52.0	52.0		N.N.W.	Overcast, but fair.
10	29.74	53.0	29.89	54.0	44.5	49.5	52.0		W.	Overcast, but fair.
11	29.48	53.5	29.28	55.0	48.5	53.5	53.5		S.S.W.	Fine morning, overcast towards noon; highest temp. 11½ a.m.; brisk wind.
12	29.18	47.0	29.17	48.5	34.5	36.0	42.0		W.S.W.	Fine 9 a.m., rain and sleet soon after; gale continuing from N.W., 6th force.
13	29.28	44.0	29.32	44.0	32.0	32.5	36.0	.025	W.N.W.	Snow at 9 a.m.; overcast all day.
14	29.33	44.0	29.06	46.5	41.0	44.5	41.5		S.W.	Overcast; S.W. gale, max. force 8th. at 10m. before 9 p.m.; rain at night.
15	29.08	49.0	29.08	51.5	43.5	52.0	56.5	.000	S.W.	Overcast; brisk wind from S.W., max. force 5th. at 4 p.m.
16	29.07	54.5	29.98	57.0	52.0	54.0	57.0	.005	S.	Clouded, much wind from S.W. max. for. 12th. 3 p.m.; heavy rain at night.
17	29.77	54.0	29.86	54.0	45.5	52.5	52.0	.235	S.W.	Fine morning; floating clds, slight deposition at noon; overcast p.m.; S.W.
18	29.5	49.0	29.27	51.0	37.0	46.0	49.0	.005	S.S.W.	Cloudy, S.W. gale increasing, 1½ p.m. breeze, gr. for. 5½h. 9 p.m.
19	29.43	53.0	29.62	54.0	43.0	52.5	51.0	.006	W.	A fine morning; fair all day.
20	29.56	57.0	29.61	59.0	49.0	47.0	57.0		S.S.W.	Very fair.
21	29.75	58.0	29.72	59.0	54.0	57.0	58.0		S.S.E.	Very fair a.m.; overcast p.m.
22	29.61	58.0	29.56	59.0	55.0	56.0	59.0		S.S.E.	Overcast, but fair.
23	29.4	57.5	29.34	58.0	53.5	56.0	57.0		S.E.	Fair a.m.; overcast p.m.; heavy rain, with a brisk wind from the S.E., at night, gr. force 5½h. at 10½h. p.m.
24	29.53	57.0	29.36	58.0	51.0	45.0	53.0	.160	S.	A fine morning; fair all day.
25	29.55	54.5	29.46	55.0	48.0	51.0	53.0		S.S.E.	Overcast all day; rain at night; a gale from S.E., max. force 7½h. at 30m. [past 6 p.m.]
26	29.22	55.0	29.36	56.5	48.0	43.5	54.0	.188	S.S.W.	Rain a.m.; overcast p.m.
27	29.33	50.0	29.14	52.0	48.0	46.0	51.0	.060	S.S.E.	Rain 9 a.m. cont. all day; much wind from S.E., max. pres. 7th. 30m. p. 3 p.m.
28	29.8	51.0	29.04	52.5	45.0	45.0	49.0	.435	S.	Fine morning; rain at night; wind variable, force 9½h. at 5½h. a.m. of 18th.
29	29.81	49.0	29.97	56.5	42.0	40.0	46.0	.705	W.S.W.	Gale continuing, force 9th. at half-past 11, S.W.; calm evening. [heavy rain
30	29.17	47.5	29.18	50.0	42.0	39.0	44.0	.026	S.S.E.	Very fair a.m.; overcast p.m.
31	29.33	47.5	29.3	49.0	50.0	38.0	42.0		W.	A dense fog; fair p.m.; rain at night.
Mean	29.49	52.41	29.43	54.49	46.73	50.06	52.75	1.080	Sum.	
					Thermometer:		Dew Point:	Height of the cistern of the barometer above the ground, 25ft. 6in.		
					9 a.m.	3 p.m.	9 a.m.	Height of the cistern of barometer above the presumed mean level of the sea, 473ft. 6in.		
					3rd 20.06	3rd 20.06	5th 55.0	Height of the external thermometers above the ground—Rain, 38ft.; Self-reg., 38ft.		

CRITICAL OBSERVATIONS ON BISHOP BURNETT'S
 "HISTORY OF THE REFORMATION OF THE
 CHURCH OF ENGLAND."

(Continued from page 206).

Among the opponents of Burnett is to be numbered Hickes, now remembered chiefly for his works on northern literature.¹ The bitterness of theological odium, sharpened by party rancour, urged him to assail his performance. He was the leader of that party in the church which could not frame the lips to pronounce the oaths of abjuration in King William's time. Before the Revolution he held the deanery of Worcester. Burnett had impeached the consistency of his conduct,² in first admitting the excellence of the reformation in religion and government proposed to be made by the Prince of Orange, and afterwards in denying that it was calculated to promote the interest, honour, and glory of the nation. But, with all Hickes's acuteness and ability—with all his disposition to pounce, with a lyncean quickness, upon every misstatement of facts or reasoning in the enduring volumes of Burnett—he has only ventured to bring this one explicit charge against him, that he had published a letter of Luther falsely and imperfectly.

As it was the singular lot of Burnett to be so often vilified and insulted, in his character as a divine, a scholar, and a man, the justice due to his memory compels us to give the substance of some of his replies in his own words; because there is that appeal to certain and momentous facts which must satisfy the unbiassed that they have the impress of truth upon them. Besides, these replies being known to so few, it is to be presumed that alone will exempt them from the charge of tediousness in the estimation of the curious. Adverting, then, to Hickes's allegation, the bishop commences by saying that "it was this accusation which determined him to write these reflections; and that he could otherwise have despised the author's malice with the same patience and easiness that he had

¹ Many and great, however, are the defects of his *Thesaurus Septentrionalis*. In prosecuting, for instance, his etymological researches into the dialects of our continental ancestors, Hickes has committed the singular blunder of confounding the old Saxon and Franca, which are so very opposite.

² "I can assure the world," says he, (p. 57-8), "that in the list of the divines who were represented in wishing that the then prince would engage in our defence, the late Dean of Worcester (Dr. George Hickes) was named for one, how truly he best knows."—See *Reflections upon Dr. Hickes in some Letters upon Dr. Burnett and Dr. Tillotson*.

formerly expressed, when provoked by him. But I confess," proceeds he, "I had a true zeal of maintaining the honour of the work, and justifying it from all blemishes. I will not open so black a scene as to tell what pains some, who are called protestants, have taken to undermine the credit of the book. The three persons who were most concerned in it have answered it elsewhere. Two of them were the under-workmen to one of an higher form; but hitherto all the attempts that have been made that way have succeeded, contrary to expectation, to the raising and establishing the credit of that work." Burnett then proceeds to tell us that in the summer of 1769 he was desired by Dr. Thomas Tenison, afterwards Archbishop of Canterbury, to go and examine the manuscripts in Corpus Christi College, in Cambridge. He met Dr. Barker there; and that learned society afforded him all the conveniences for reading or copying their manuscripts. He was likewise received with great kindness by Dr. Turner, afterwards one of the non-juring bishops, who not only lodged him with himself, but furnished him with two amanuenses, Mr. Smith and Mr. Tomkinson, who afterwards also refused the oaths: "but they are men of truth and probity; and I appeal to them how faithfully every thing was copied out, and how exactly all was compared." The hands of the reformers, Luther's in particular, were very hard to read; and though he had then been much practised in reading the hands of that age, yet he and his amanuenses were often put to guess rather than read.

In some letters, which could not be read, Archbishop Parker had written their reading in the margin. That letter of Luther grew so hard to be read that he could not go far in it; so that he only copied out the beginning and the end of it. It seemed to agree so entirely with the method which most of the divines of the Church of England took, for a great while, of explaining Christ's presence in the Sacrament in the term "real presence," without using the word "figure," that "though," says Burnett, "I never liked that method too well—for I never cared to use the phrase of real presence, nor avoided to call the Sacrament a figure—yet I was willing to show that here a way was proposed, and (as I thought) once agreed to, of keeping the matter in those general words. And thus, in compliance with a method that I had never used myself, I honestly published as I thought we had read it. No comprehension could be designed by this, but that which has been promoted by many of the most zealous divines of this church. The learned and noble Seckendorf addressed some persons to me to be satisfied concerning that letter, who directed them the best I could. They had

free access given them, and they reported no difference to him but *nihilominus* for *nihil minus*. If either this was too hastily examined, or if the writing seemed to favour those mistakes with which Dr. Hickes charges me—of which I could say nothing at such a distance of time—I am sure that, whatever might occasion the mistakes, there was no fraud intended; there could be none; nor was there any consequence to be drawn from it. It was shewed what Bucer's proposition was, to which I fancied that Luther had once agreed. But, so exactly will I follow truth, that whensoever an attested copy of that letter is sent me from that learned body, which two worthy members of it have promised to procure for me, I will certainly publish it in the next edition of my history. In a matter, in short, of no great consequence, there was too little care had in copying, or examining, a letter writ in a very bad hand."³

In addition to these more distinguished authors, the Rev. Simon Lowth, or, as he is elsewhere denominated, "the holy watchman," stepped forth to join the hostile phalanx, and thought proper to address the bishop in terms so disrespectful and indecent, that, even in an age not remarkable for any thing like delicacy of feeling in those who exercised the censorial office, they were yet proscribed by the more liberal and better educated part of the community. "You conceal Cranmer's subscription⁴ where you should have mentioned it. What shall we call this? Fraud, falseness, equivocation, shuffling, impudence? I call it neither; but some in England call it a *Burnettism*, meaning a complication of all this!"⁵

Now the coarse ribaldry, and the gross slanders, with which Mr. Lowth has stained the page of controversy, would have been passed over by us wholly unnoticed, if he had not coupled with them the scandalous accusation that Burnett and Bishop Stillingfleet had unlawfully combined in their endeavours to lessen the sanctity of the episcopal ordination; and had employed Archbishop Cranmer's name in furtherance of their iniquitous design, and also that of Archbishop

³ See Burnett's *Reflections upon Dr. Hickes's Pamphlet*, p. 79 (seq.) Thomas Crenius, in his *Commentationes Theologicae*, had urged the same charge against our historian that Hickes had done, and published Luther's letter at length.—See upon this subject *Hist. of the Reform.* vol. iii, p. 301.

⁴ To prove that this is a wilful misrepresentation, the reader has only to turn to the first volume of Records appended to the *Hist. of the Reformation*, and he will find a paper entitled "A Declaration made of the Functions and Divine Institution of Bishops and Priests," to which Cranmer's name is subscribed, after the vicegerent Cromwell, p. 483.

⁵ See *Some Remarks on Dr. Burnett*, p. 14, by Simon Lowth. Lond. 1686.

Usher.⁶ Every theological student is aware that the former prelate leaned at one time to Erastian principles, or something very like them: a circumstance not to be surmised in the history of a divine so deeply read as he was in the fathers' councils and canons. The fact, however, seems irresistibly clear, that the primate had entertained "singular opinions"⁷ of the prelatical functions; for we have upon record his refusal to proclaim the apostolical institution of episcopacy; and his belief that the offices of bishop and priest were at first one and the same; though afterwards, in the book which passes under the name of Cranmer's *Catechism*,⁸ he fully assented to the divine institution of each, having now quite laid aside, as Burnett observes, "those singular opinions." Well, indeed,

* To those who are acquainted with the writings of this most learned prelate, the assertion of his holding opinions at variance with the orthodox on the subject of episcopacy, may well excite the surprise of the readers of his several tracts in favour of that institution. Admitting that, in his treatise concerning the original of bishops, or a *Chorographical and Historical Disquisition touching the Lydian or Proconsular Asia, and the seven Metropolitane Churches contained therein*, that after proving from ACTS xix, v. 17, supported by REV. ii, v. 1, that bishops and metropolitans were instituted by the Apostles, a few passages may be selected from this treatise, which shall bear a doubtful character as to the degree of superiority in which he placed the order of episcopacy; yet there is sufficient evidence, from the commencement to the end of this book, that the Archbishop of Armagh was a most decided episcopalian.

† "It is true that he had some singular opinions about ecclesiastical functions and offices, which he seemed to make wholly dependent on the magistrates, as much as the civil were; but he never studied to get his opinion in that made a part of the doctrine of the church, reserving only to himself the freedom of his thoughts, which, I have reason to think, he did afterwards either change, or at least was content to be overruled in it."—*Hist. of the Reform.* vol. i, p. 348. But though, at the accession of Edward VI, he intimated to his brother bishops that the possession of their sees depended on the pleasure of the crown, and accordingly accepted a new commission to execute the functions of an archbishop, yet assuredly he was not under the influence of Erastian principles when that book of high authority, though not of law—for it never received the royal confirmation—the *Reformatio Legum*, appeared, the chief execution of which belonged to him (*Summæ negotii præfuit Thomas Cranmerus archiepiscopus Cantuar. Præf. Reform. Legum*). For the first head asserts that the four first general councils are to be received; and in that of Chalcedon, one of the four, we have this decree:—'Επίσκοπος ις πρεσβύτερος βαρύνει ἀναφίξειν ἡρεσιν καὶ ἰσχυρῶς. It is sacrilege to bring back a bishop to the degree and order of a presbyter.

* It was translated from a German catechism, and a latin version of it was made by Justus Jonas, a man of considerable note among the Lutheran party.—See Burton's Preface to Cranmer's *Catechism*. Oxford, 1829.

may they be stated as strange notions, not recognised as the confessed doctrines of the Anglican Church, when we find, with the exception of the archbishop and a single adherent to his opinion, that the commissioners appointed to deliver their sentiments on certain theological points, declare "that a bishop hath authority by Scripture to make a priest; and that any other ever made a priest, since Christ's time, they read not." The twelfth question, Whether in the New Testament be required any consecration of a bishop and priest, or only appointing to the office be sufficient, Cranmer had but one commissioner in unison with himself, the rest declaring that ordination, or consecration, is necessary. The authenticity and importance of the document containing these replies, are equally indisputable.

This calumniating pamphleteer (Lowth) has also gone the length of asserting that "the bishop endeavours to lower the character of Cranmer in every way;" although Burnett has emphatically said, "If we consider narrowly, we shall find as eminent virtues and as few faults in Cranmer, as in any prelate that has been in the Christian Church for many ages." They, then, who are willing to take facts for the basis of their reasoning, will be slow to admit the truth of Lowth's assertion. It will be alleged, perhaps, by the professed panegyrists of the primate, that our historian pronounces an unjust censure on his capacity when he says "he had a good judgment, but no great quickness of apprehension, nor closeness of style, which was diffused and unconnected; therefore, where anything was to be penned that required more nerves, he made use of Ridley."° Pas-

° Archbishop Lawrence, in his *Bampton Lectures*, has severely commented upon this remark of Burnett, accusing him of assuming what he knew was not the fact, with respect to his borrowing the assistance of Ridley's pen in those compositions to which his name was affixed. We cannot, however, give an unqualified assent to the censures of the archbishop on this occasion. The parts and acquirements of Ridley were acknowledged to be of the first order by his adversaries—see Lingard's *Hist. of England*, vol. vii, p. 268—and his unbending principles appeared in every action of his life. His boldness, for instance, was equal to his address in maintaining the usurpation of Lady Jane Grey, as a necessary step for the preservation of the protestant religion. He who is strongly nerved in his deeds, will, in all probability, be so in his writings. Burnett, therefore, in asserting that "when any thing was to be penned that required more nerves he made use of Ridley," has not shown himself ignorant of either human nature or human history. We collect, indeed, from Ridley's examination at Oxford—see Fox, 1317—that Cranmer had consulted him on the compilation of the Articles; and that, according to his own acknowledgement, he had noted many things for

sages, no doubt, may be selected from the archbishop's writings, especially from his celebrated work on the Sacrament, of great pith and pointedness of expression, full of impassioned vividness, with strong and masculine eloquence. But the style of his performances is, in general, rather prolix and cumbrous; some of his protracted sentences weary and exhaust the mind; in others, there is a manifest want of lucidness of arrangement. Yet to attain perspicuity in his compositions, seems to have been the highest object of his ambition, if we may judge from one of his own observations, where he flatters himself that he has "made more clearly appear the light from the darkness, the truth from false sophistical subtleties, and the certain word of God from men's dreams and fantastical inventions." It is extremely unfair, however, to conclude that because Burnett does not proclaim Cranmer's English style to be incomparable, his diction always lucid, nervous, elegant, and varied, he therefore sought to impugn the powerful intellect of him who had the principal share in the compilation of our Articles, Homilies, and Liturgy, to whom the nation owes so large a debt of gratitude for his admirable conduct of our Reformation, from its earliest commencement under Henry VIII to the accession of Edward VI.

With still more palpable unfairness, it is asserted that Burnett was decidedly hostile to the memory of Cranmer, because he censured the share which the archbishop had in the condemnation of Lambert, Anne Askew, George Van Pare, Frith, Joan Boucher, and other religious offenders; particularly making to the young king the most urgent solicitations to bring the last named delinquent to the stake. In speaking of this misdeed, our historian attempts to spread over it a most bewildering gloss, palliating it in these vague and inconsistent terms: "One thing was certain, that what he did in this matter flowed from no cruelty of temper in him, no man being further from that black disposition of mind; but it was truly the effect of those principles by which he governed himself."¹⁰ In

them. Surely, then, there is nothing far-fetched in the suppositions that the bolder views and stronger talents of Ridley may be displayed in these notes. Even Strype throws out this conjecture, that the archbishop was the penner, or at least the great director, of the Articles, with the assistance, as is very probable, of Bishop Ridley.—*Mem. of Cranmer*, p. 272.

¹⁰ *Hist. of the Reform.* vol. ii, p. 232. A contemporary of Burnett—one, we should suppose, who held "a Roman pen"—in allusion to this act of Cranmer's, remarks that "he even went out of his way to glut his thirst for human blood, signing uncanonically the warrant for the execution of Seymour, the Lord High Admiral, which was contrary for a peer of parliament

this one instance, Cranmer completely departed from the mildness of temper, and moderation of principle, which usually marked his actions. Even the tears of Edward upon signing the warrant, which do honour to his memory, made no impression upon this severe punisher of heresy. Nevertheless, Burnett is still ready to play the advocate for the primate; for he remarks that "when the young king said to him that if he did wrong it was in submission to his authority, and he should answer for it to God, this struck the archbishop with much horror, so that he was very unwilling to have the sentence executed."¹¹ Great, however, as may have been his sensitiveness on that occasion, it did not deter him from committing his victim to the flames, as he believed himself obliged, says another of his apologists, "for conscience sake." It may be, and indeed has been, said in justification of Cranmer, that he was not present at the council board when it was determined to revive the Romish statutes, which declare heresy to be a crime punishable with death; but surely his absence entitled him to no praise of superior lenity, as he offered no opposition to the sentence. To reconcile such a line of conduct on the part of Cranmer with his scrupulous conscience, and with his gentle nature, it will perhaps be near to the truth if we say that we here witness the prevalence of system over temper: for though the great work of ecclesiastical reformation was uppermost in Cranmer's mind, he was unable to guard himself against the insidious approaches of that Jesuitical spirit by which the pontifical power had so long borne down the most precious rights of man.

Another pregnant indication of *malus animus* in Burnett, towards the archbishop, is discovered by Lowth in his observation respecting Cranmer's celebrated protestation on entering the See of Canter-

to do by the law of parliament.—See *Observations on the Character of Archbishop Cranmer*, p. 21. London, 1686. Now, though it was enacted in the constitutions of Clarendon, under Henry II, that no bishop, abbot, or clergyman, was to judge any person to the loss of life or limb, or to give his vote or countenance, for that purpose, to others; and a much older canon to that effect had been brought into England by Lanfranc—see Stillingfleet's *Ecclesiastical Cases*, vol. ii, p. 254—yet, as the head of the English Reformers, Cranmer might choose to take this occasion to show that it was not required of him to be bound by the narrow superstitions of a Roman canon, especially as there was no reasonable pretext for accusing him of inhumanity in putting his name to the warrant, as the council's order for the execution is made conditional on the king's sanction being obtained: "the king's writ," says Burnett, being first directed and sent forth for that purpose."

¹¹ Eleven months elapsed between her examination in April, 1549, and her committal to the flames on May 2, 1550.—Strype, *M-m.* vol. ii, p. 335.

bury, "that it agreed better with the maxims of the casuist than with the prelate's sincerity." When Cranmer was consecrated he swore canonical obedience to the pontiff; but before he took the oath he called four witnesses into St. Stephen's Chapel, and in their presence declared "that he did not intend to restrain himself thereby from anything to which he was bound by his duty to God or the king, or from taking part in any reformation of the English Church which he might judge to be required." Now surely, to a plain understanding, not addicted to sophistical refinements, the only question here is, ought not Cranmer, instead of receiving the bulls from Rome, with a perfect knowledge of the obligations thereby imposed, to have explicitly told the king that, already resolved to oppose the papal authority, his conscience would not allow him to accept the vacant archbishopric from any other hands than those of his majesty, or to acknowledge any foreign ecclesiastical supremacy? Many of the props of good government and religion must fall, if Cranmer's conduct be justifiable. Where, in short, is the man of virtue who can approve it? where the man of wisdom who can be satisfied, in the instance before us, that a promissory obligation could be got rid of without some declination from the Christian character? For he who consents to take a prescribed oath, no matter whether the terms by which he binds himself to its observance be foolish or wise, cannot surely evade it without being guilty of a breach of faith. Weighing Cranmer's conduct, then, with the largest allowance to human frailty and human error—with the amplest indulgence for the exigency of a pressing occasion, "which often prevents a man from calling into action fixed principles"—we cannot but subscribe to the opinions of those who maintain it to be utterly indefensible.

Reverting, then, to the insinuation of Burnett's antagonist, that he was unfriendly to the reputation of Cranmer, we should say that, so far from there being any appearance of a want of heartiness, which would excite suspicion and raise disbelief of the truth of that statement, it is by no means difficult to produce instances where he has glossed over faults in Cranmer which could not be hidden, and entirely overlooked others in which more candid historians^{1 2} must

^{1 2} Honest old Fuller seems to have been partly of this opinion. "Cranmer," says he, "had done no ill, and privately many good, offices for the protestants; yet his cowardly compliance hitherto with popery, against his conscience, cannot be excused: serving the times present in his practice, and waiting on a future alteration in his hopes and desires."—*Church Hist.* p. 371.

admit that he did not act up to his high functions and responsibilities. Now it is evident to the most careless reader that Strype, in summing up the character of the archbishop, holds him in the profoundest reverence. "I do not intend," says he, "these my collections for such a panegyric of him as to make the world believe him void of all faults and frailties—the condition of human nature. He lived in such critical times, and under such princes, and was necessarily involved in such affairs as exposed him to greater temptations than ordinary. And if any blemishes shall, by curious observers, be espied in him, he may therefore seem the more pardonable; and his great and exemplary goodness and usefulness in the church of God may make ample amends for some errors." Yet the rectitude of the biographer's mind, and his reverence for historical truth, would not allow him to suppress Cranmer's six recantations.¹³ He had the honesty to publish all these, which were not fully known before; whereas Burnett has unduly omitted these lapses, and has given favourable impressions of those which he mentions.

The sudden and unexpected downfall of Queen Anne, no doubt, placed Cranmer, for a time, in great jeopardy: and he has been extolled immoderately by Burnett for venturing to write a letter to the blood-thirsty persecutor in behalf of this most injured lady. What less could the first minister of religion do, when he acknowledges that "next to his grace, he is most bound unto her of all creatures living," and when his heart must have secretly told him that a cruel and unjust sentence was about to be passed on her? In this much-praised letter, in vain must we look for any generous burst of feeling, for any touches of that high-minded magnanimity, which, in the face of all consequences, can vindicate the honour of the Lutheran¹⁴ Queen. Surely there is nothing of such a nature in this declaration respecting the object of his sympathies and affections. "If she be found culpable, considering your grace's goodness towards her, and from what condition your grace of your only meer goodness took her, and set the crown upon her head, I repute him not your grace's faithful servant and subject, nor true unto the

¹³ Five of them are given in his *Eccles. Mem.* vol. v, p. 392, and the other in Fox, p. 569.

¹⁴ "What, though I know her virtuous
And well deserving, yet I know her for
A spleeny Lutheran; and not wholesome to
Our cause, that she should lie in the bosom of
Our hard-ruled king."—*Henry VIII, Act 3rd.*

realm, that would not desire the offence, *without mercy*, to be punished to the example of all others."

In estimating, however, Cranmer's character, it is but common justice to him to remember that he grew into greatness under disastrous influences, that he lived in a semi-barbarous court, the sovereign of which was at one time a cool, reasoning, deliberate tyrant, at another, so possessed with those furies of the mind which make men rage and storm like the sea, that he tossed all the duties of justice and honour to the winds when they offered any contradiction to the indulgence of his lusts and passions ;¹⁵ being of so daring and domineering a temper that it has been said of him, "that he dreaded nothing less awful than the falling of the heavens. Under such a prince,"¹⁶ Cranmer was called, or rather forced, from his lettered solitude, to become the directing and governing head of ecclesiastical affairs ; for with his dying breath he declared that he was compelled to accept the see of Canterbury ;¹⁷ and it was only by trimming his sail to every wind, by a compromise to the over-ruling difficulties of his situation, that he could hope to preserve even his life, much less to accomplish any of the great plans of good which he had formed for his country. It might have been expected of him that he would set his face "like a flint" against all Henry's unjustifiable acts of turpitude and flagitiousness. But had he been endowed by nature with the inflexible courage and firmness of a Martin Luther or a John Knox, and exhibited them before a man who was above

¹⁵ Swift styles him, in his usual coarse way, "an infernal beast," with reference only to his spoliation of the church, which many, in these days, would designate as church reforms. Granville Sharp, in his well-known treatise upon the Greek Article, considers him to be one of the horns of the *beast*. "A judgment," says he, alluding to Rev. chap. xvii, v. 16, "first begun by our English horn, Henry VIII."

¹⁶ The following judicious apology is offered by Dr. Parr for the temporizing compliances of Cranmer :—"It was quite impossible to suppose that with such a monarch as Henry VIII, and in such a disturbed condition of things, civil and ecclesiastical, human wisdom and human virtue could, in all cases, have enabled any human being to preserve his innocence."—See his works.

¹⁷ "I protest before you," was the archbishop's solemn asseveration in the presence of the commissioners of Oxford, "that there never was man came more unwillingly to a bishopric than I did to that. Inasmuch that when King Henry did send for me in post, that I should come over from Germany, I prolonged my journey by *seven weeks the least*, thinking he would be forgetful of me in the meantime."—See Ellis's *Historical Letters*, vol. ii, p. 42.

all control, the scaffold¹⁸ would immediately have reeked with his blood, since, according to an emphatic observation of Sir Walter Raleigh, "if all the patterns of a merciless prince had been lost to the world, they might have been found in this one king." Living, then, as it were, near the den of a furious tiger, ready to spring upon him in any fit of caprice—for the brutal Henry, in some of his sudden acts of passion and vengeance, can only be compared to such an animal—it has ever struck us that Cranmer's protection of the Princess Mary¹⁹ from the wrath of her father, his endeavours to save Sir Thomas More,²⁰ Bishop Fisher, and Cromwell (efforts all

¹⁸ If all the other acts of Henry's life had been free from reproach, his consigning so many of his subjects to a violent death would alone be sufficient to bring down upon his memory the curses of posterity. Lord Herbert marshals the number of his victims in the following order:—"And for testimonies of this kind, some urge two queens, one cardinal (in prociuctu, at least) or two—for Pole was condemned, though absent—dukes, marquesses, earls and earls sons, twelve barons and knights, eighteen abbots, priors, monks, and priests, seventy-seven; of the more common sort, between one religion and another, huge multitudes."—See *Life of Henry*, vol. iii, p. 267. And yet Mr. Turner, instead of laying him under ban and anathema for these judicial murders, can invest him with a false and imposing greatness. The honor, however, if honor it be, of endowing him with virtues which his acts prove he never could have possessed, cannot be claimed by this pourtrayer of historical character, since a Mr. Lewis has been beforehand with him in this respect, who has braved all enlightened and impartial criticism in the following delineation of the Tudor king. "Having thus done justice to the ungrateful rebel, the English cardinal, let us return to the English patriot king, whose character I shall recapitulate in few words, with entire impartiality, every article of which is founded upon undeniable facts recorded in this treatise. Henry, then, was a person of great sagacity and judgment, of unwearied application to business, knowing men and how to manage them. Hence that constant harmony with his parliaments, through a reign of almost forty years; parliaments *freely* chosen, *freely* acting; not bribed, not *bullied*, not biased by any thing but the native dignity of this prince, his acknowledged prudence, probity, and good designs; deliberate in council, singularly patient and persevering to bring to effect things once resolved on; of considerable learning himself, a friend and patron to learned men, and to every useful and ornamental art and science; social, magnificent, magnanimous; a tender husband and indulgent father; a faithful friend, a generous master; not lewd, not cruel, not voluptuous; an honest, open-hearted man, a sincere Christian, and a patriot king!"—See *The Life and Reign of Henry VIII, or the Patriot King*, by Edward Lewis, p. 242-43. London, 1769.

¹⁹ He is said to have persuaded Henry not to put his daughter Mary to death, which we must in charity hope, adds Mr. Hallam, she did not know. —*Const. Hist.* vol. i, p. 131.

²⁰ His tender heart and abhorrence from blood-shedding propounding

made at the risk of his life), and his stout resistance to the sanguinary enactment of the Six Articles,²¹ or whip with six strings, as it was familiarly called, subjected as he was to trials unknown to ourselves, assume the magnanimity of virtue.

It must, indeed, have fretted his righteous soul, whilst struggling to do the work of God in the most acceptable manner—to spread that word of truth among the people which was given “to be a lantern unto the feet, and a light unto their paths”—to find himself exposed to the rage and malice of those persons who ought to have been the champions of the genuine faith “once delivered to the saints,” instead of the corrupt abettors of idolatrous superstitions. Further, it may be observed, that his patronage and love of letters—for he had a richly endowed and even ornamented mind; the boundaries of his scholarship being not limited to Hebrew, Greek, and Latin only, but extending to the French, Italian, and German tongues—his desire to admit all to a share of that intellectual improvement, which all have an interest in acquiring:²² the moderation,

these politic considerations to the secretary, which were the properest arguments to be used with a statesman, and for him to use and urge before the king, that so he might be an instrument of saving the lives of these men, however they differed from him, and, it may be, were none of his very good friends.”—*Strype, Memorials of Archbishop Cranmer*, p. 28.

²¹ Dr. Lingard affirms that Cranmer wrote an apology to the king for his presumption in having opposed the opinion of his majesty.—*Hist. of England*, vol. vii. But we apprehend that this is wholly a mistake or misrepresentation; for we are almost certain that the learned doctor can produce no authority for this statement.

²² Our age is distinguished by a generous concern for the instruction of the lower classes of the community. At the time of the Reformation the poor man's son, unless he sang in the choir or responded in the services of the church, had not even the benefit of being taught to read. But though Cranmer was the son of a gentleman, and was brought up, as Fox says, “not without much good civility,” yet he rose superior to all contracted prejudices, to all exclusive systems, and nobly advocated the education of the poor. For when it was proposed by some of the Commissioners that none should be admitted to the Grammar School of Canterbury but only gentlemen's children, the archbishop said that “he thought it not indifferent so to order the matter;” “for,” said he, “poor men's children are many times endued with more singular gifts of nature, which are also the gifts of God: as with eloquence, memory, apt pronunciation, sobriety, and such like, and are commonly, also, more apt to apply their study than is the gentleman's son delicately educated.” This whole argument well deserves the attention of the religionist, the philosopher, and the politician, and shows that the Reformers looked to education as the most effectual means of securing the attachment of the people.—See *Strype, Memorials of Archbishop Cranmer*, book i, chap. xix.

judgment, learning, and temper, which he displayed in the compilation of the national creed, are most honourable to his memory, and will command the veneration of every true protestant. Doubtless, there are serious blemishes in the conduct of Cranmer—"he too generally complied with evil counsels," to use the words of a great philosophical historian, "but nearly always laboured to prevent their execution"—yet, admitting all the distinctions and exceptions taken to his character—yes: if his mind was not of the firmest texture, so that he often yielded to other reformers in the intrepidity which is evinced in confessing the most obnoxious truths, when the great and mighty are combined for their suppression—if there were other traits in his behaviour which are incapable of the ordeal of enquiry—if the saint was sometimes merged in the courtier—if, in short, we cannot write his character in sunbeams—yet all his imperfections will be lost in the remembrance that he was the leader of that small, but illustrious band, whose undaunted zeal for truth consumed them in the fires²³ of martyrdom, and sent up their pure and glorious souls like Manoah's angel in the flames.

The next attack we have to notice upon our historian was made by a bishop; but never, perhaps, since the Reformation, has any one been elevated to the episcopal office who has so completely disgraced it as Parker, Bishop of Oxford. That see was his reward for the prompt compliance which he manifested to the order subjoined to the second declaration of indulgence published by the infatuated James, who required that it should be read by the clergy in all churches. But this most devoted slave of royal despotism, still more indelibly stigmatised himself, by writing in defence of the doctrines of transubstantiation, and the worship of images and saints; and by accepting the presidentship of Magdalen College upon the expulsion of the intrepid assertor of its rights, Dr. Hough: and to sum up his infamy, he, a protestant bishop, with a profligacy of conduct unparalleled in the history of time-serving, openly and eagerly expressed his willingness to embrace the Roman Catholic religion. They who are sincere in their profession of conscientious attachment to the constitution and doctrines of the Church of England, and who support

²³ The history of the Church of Rome abounds with excesses of party spirit; and Dr. Lingard has seldom been more influenced by it than when he pronounced these sufferings "to be short." We are positively assured by an eye-witness—see *Eccles. Biog. Hist.* vol. iii.—and the Roman Catholic historian must have read the paper, that Cranmer held the right hand in the flame a good share before the fire came to any other part of the body, not shrinking while it was reduced to ashes.

them—not because they find them established, but because they deem them salutary and scriptural—will assuredly pardon Burnett for treating such²⁴ a character without any deference and respect. The provocation, indeed, which he had received from Parker, was quite sufficient to stir up a ferment of indignation in a bosom less calm and gentle. For this apostate²⁵ from the religion of his forefathers, did not hesitate to say “that the two grand forgeries of making Cranmer appear a mere sacramentarian as to doctrine, and an Erastian as to discipline, were the grand singularities of this history, and the main things that gave it popular vogue and reputation with his party; so that were these two blind stories and the reasons depending on them retrenched, it would be like the shaving of Samson's hair, and destroy all the strength peculiar to the history.”

In allusion also, to Burnett's propensity to take a share in discussions—which his antagonists affect to consider solely temporary and secular—we have this observation, which, if we may judge from his triumphant tone, Parker conceives to cut deep, like the former, into the character of the work. “Our author would be well advised to employ his pains in writing lampoons upon the present princes of Christendom, especially his own, which he delights in most, because it is the worst thing that he himself can do, than collecting the records of former times; for the first will require time and postage, but the second is easily traced in the chimney corner.” Burnett's comments on the foregoing passage, however fully we may concur with him in his opinion of this detestable²⁶ man, cannot justify his appli-

²⁴ By the poet, as well as the politician, this prelate was made

“A figure for the hand of scorn
To point his slow, unerring finger at.”

In that humorous but coarse piece of satire, *The Rehearsal Transposed*, Andrew Marvell designates him under the name of Bayes; while his critical lashes on his ecclesiastical, political, and other performances, are dealt with a most unsparing hand.

²⁵ Even the noted Father Petre alleges it, in one of his letters, as a matter of complaint against Parker, that the quickness of his conversion was not calculated to draw others after him to the old religion.—See *A Letter from a Jesuit at Liege to a Jesuit at Fribourg*, giving an account of the happy progress of Religion in England. February 2nd, 1687-8.

²⁶ We turn with a disgust that amounts to loathing from the utterance of such sentiments as the following, in an English prelate. Upon Parker's being asked what was the best body of divinity, his answer was, “that which could help a man to keep a coach and six horses was unquestionably the best.” He had exalted the king's authority in matters of religion to that impious extent, that he condemned the ordinary form of saying the king was under

ation of an epithet which, under any circumstances must be unbecoming the dignity of his profession. "Who would not think that this period was written by Mr. Lowth, it being so obscure and ill expressed that nothing is plain but the malice of it? But he of all men should be the farthest from reproaching any for writing lampoons, who has now given so rude a one on the late king, and the lords and commons; if bold railing without either wit or decency deserves that name. I will only say this further, that if one had the ill-nature to write a lampoon on the government, one of the several articles in it would be, that it seems writers are hard to be found, when such a *baboon*²⁷ is made use of. It is lampoon enough upon the age that he is a bishop; but it is downright reproach that he is made the champion of a cause, which, if it is bad of itself, must suffer extremely by being in such hands."

However great might be the estimation in which the *History of the Reformation* was held among the learned on the Continent, it is not surprising that this work should be assailed by the Romanists; especially as the title-page of it, might be deemed by them an offensive declaration of war against the holy Roman catholic and apostolic church as it styles itself. Among the foremost to march to battle against this redoubtable protestant were Varillas and Le Grand, two writers, who would have acquired more fame, even with the learned of their own communion, if they had employed half the zeal and industry to give currency to historical truth, which they used to disseminate their slanders. But, so feeble and ill-directed were these attacks, that their weapons dropped harmless from their hands, or else recoiled with destructive force upon themselves.

God and Christ, as a crude and profane expression, asserting that though the king was indeed under God, yet he was not under Christ, but above him. Another of his most offensive opinions was, that it is better to indulge men's vices and debaucheries than their conscience.—See *Eccles. Pol.* p. 54.

"Although bishops, even in Burnett's days, were no longer considered sacred abstractions, he felt that some apology was due to his readers for calling his ecclesiastical superior a baboon, or else he would not have exposed himself in the following manner. "When the cardinals in Rome go abroad without foccos on their horse's heads, it is understood that they will then be incognito, and they expect nothing of that respect which is paid them on other occasions. So, since there is no focco at the head of this discourse, no name nor designation, it seems the writer offers himself to be examined without those nice regards that may be due to the dignity he bears; and indeed when a man forgets what he is himself, it is very natural for others to do it likewise."—See *An Inquiry into the Reasons for abrogating the Test imposed on all Members of Parliament offered by Sa. Oron.*

Nothing, indeed, can be easier for Burnett than to refute these opponents whenever they descend into particulars, and quit that declamatory style of abuse, which constitutes their strength, from the confidence with which it is advanced, and the difficulty with which it is disproved. Whenever Varillas is so much off his guard as to hazard any specific assertions, our historian is completely successful in shewing, not only how very weak a foundation they have, but indeed, upon what utter fallacies and entire misapprehensions they rest. These fallacies are the most glaring in Le Grand's attack. What tyro in history, for instance, would be weak enough to believe, on the bare dictum of this historian, that they who made such a noble stand for the outraged rights of conscience and liberty—they to whom we are indebted for a purer form of Christianity, are to be regarded only as false prophets? that none could be more ignorant:¹⁸ than Thomas Cromwell? and that Lord William Russell—who has left so bright a name in British story—was ever ready to disturb the public tranquillity, and to overturn the fundamental laws of the state? When Le Grand could indulge in these notable extravagances, Burnett may surely be justified for parting with his antagonist in a tone unusually contemptuous; feeling no triumph in his victory¹⁹ over one, whose prejudices were so inveterate that he

¹⁸ We read in Cavendish's interesting and authentic life of the great cardinal, that upon a bill of articles being brought into the House of Commons to condemn Wolsey of treason, Cromwell "inveighed so discreetly, with such witty persuasions and deep reasons, that the same could take no effect."—Singer's edit. It is also related by Fox, that whatsoever articles and interrogatories the commissioners from the king propounded to Cromwell, when a prisoner in the Tower, "they could put nothing unto him, either concerning matters ecclesiastical or temporal, wherein he was not more ripened and more furnished than they themselves."

¹⁹ In one instance, Burnett very properly admits that his opponent stood "upon the vantage ground." "I must confess," observes he, "that M. le Grand has something of reason on his side, in what he says concerning Rodolphus, whom I believed to have been Campeggio's bastard. He proves, however, out of Sigonius, who writes the life of that cardinal, that Rodolphus was his legitimate son. Sigonius is a very good author, and I acquiesce in his authority. But had M. le Grand but cast his eyes upon the English edition he would have seen that it was not without sufficient ground that I called Rodolphus bastard, since I quote the very discourse wherein he was so called, which was composed by Sir William Thomas, secretary of the privy council, under the title of the "English Pilgrim." I had the misfortune not to have seen the life of that prelate written by Sigonius; so that it is only a fault of omission, which the author would aggravate with a malicious invention.—See Dr. Burnett's answer and vindication of him to Joachim le Grand's *Refutation of the two first books of the "History of the Reformation."*

could not follow truth with a sure and steady step, even when she stood before him to direct his way.

Of the general execution of the *History of the Reformation*, as to accuracy and trustworthiness, there can be no wide difference of opinion among competent judges ; but it will not be difficult to show that Burnett, in some instances, contracted such strong prepossessions for or against particular persons and measures, as make considerable drawbacks upon his claims to a stern impartiality. We will proceed, then, to confirm this assertion by some illustrations ; as, we believe, we have now noticed the principal objections made at home and abroad, against the *History of the Reformation*, during the lifetime of its author.

Although Burnett does not manifest towards the most prominent personage in his history, Henry VIII, that undistinguishing partiality for his character which flashes so broadly and offensively in the pages of a recent historian—who so lauds the king as almost to invest his conduct with the honours of infallibility—there is a strong propensity in the bishop to espouse this prince's side whenever it can be done with any sort of propriety—to palliate what, in strict morality and justice, every man must unequivocally condemn, and to gloss over the worst excesses of his tyranny "in the most holiday and lady terms." The indications which lead to this positive conclusion are quite evident in the commencement of the king's reign, when the subject of the celebrated divorce is introduced to the notice of the reader.

Now, if we are to believe Polydore Vergil,³⁰ the union of Henry and Catharine was a match of policy or interest on the side of the former. Cardinal Pole, however, assures us that Henry sought the alliance, not merely because he respected the virtues of Catharine, but because he was captivated with her female charms.³¹ We have the assurance, also, of the same authority, for the fact that Henry himself admitted to the emperor, her nephew, that his bride was a virgin ; and which receives a very specious and plausible colour from the following circumstance : that Catharine, on the celebration of her nuptials, was dressed in white, and wore her hair

³⁰ *Hist. of the Reform.* vol. i, p.

³¹ "Ipse ille supra omnes mulieres appetabat, supra omnes amabat ; hoc sæpe illum dixisse."—*Apol. Reg. Poli.* p. 83. In his *Apol. ad Car. v.* Cæc. p. 162, we have another sentence to the same effect :—"Quam sic initio regni amavit, ut nemo vir erga carissimam conjugem majorem ostendat amorem."

loose³²—a mode of attire emblematical, in those days, that she was a maiden when introduced to the royal bed. From a letter, also, of Peter Martyr, we learn that Arthur, instead of being the vigorous youth described by Burnett, was deemed incapable of performing the hymeneal rites, from the inherent debility of his constitution. It is impossible, certainly, not to feel some scepticism on this subject; but when we refer to the queen's appeal to Henry, without meeting any denial on his part, *de integritate corporis usque ad secundas nuptias servata*, and couple with this appeal the attestations of several grave matrons; and when we are told also that the Bishop of Ely declared before the privy council that Catherine had often denied the consummation *sub testimonio conscientie sue*, one can hardly venture to set up presumptions, even if they were of still less ambiguous or doubtful character, in opposition to the testimony of a woman respected, both at home and abroad, as a wife, by protestant as well as papist.³³

Most historical readers are aware that Burnett is our chief authority for the story of Henry's divorce from Catharine, in which the traces of Providence are so visible.³⁴ And the same proneness is here observable in him to furnish the most plausible arguments for the king's proceedings in this, what is called "his secret matter;" the same tendency to overlook or mistake those facts which are the least favourable to his cause; and to use a leniency of language upon the worst parts of it, which only can be justified on the monstrous pretext that Henry was an exempted being, privileged to remove all the restraints of duty, honour, and humanity, which stood in the way to the accomplishment of his wishes: so that, in his person, crime was to lose its nature.

The question whether his union with Catharine was incestuous, which Henry, after the beauty of Anne Boleyn had caught his affections, very soon brought himself to think, was not only debated upon scriptural grounds, but the fathers, the schoolmen, and the pope's decretals, were all introduced into this formidable and com-

³² See Sandford's *Genealogical History of the Kings of England*, p. 480.

³³ The news of the old Quenis deth ben her divulged, more than x daies passed and taken sorrowfully, not without grevous lamentacions, for she was incredibly dere unto all men for her good fame, which is grete glorye among al exterior nations."—See Ellis's *Historical Letters*, second series, v. ii, p. 76.

³⁴ "How many strange accidents concurred," is the just observation of South, "in the whole business of Henry the Eighth's divorce! Yet we see Providence directed it and them to an entire change of the affairs and state of the whole kingdom."—Sermon on Prov. xvi, vol. i, p. 211.

plicated discussion. If the authors of Scripture, however, were only to be consulted, Henry's espousal with his brother's widow must be supported entirely from those passages in Genesis³⁵ and Deuteronomy, which allows one brother to marry the relict of another, provided that the wife of the deceased brother had no issue by him—a permission granted that, if possible, the elder line of ancestry might be perpetuated. To this passage was opposed the law in Leviticus,³⁶ which prohibits such a marriage. The law and the exception were no doubt intended, by Moses, for the use of the Jews; but whether the law of Leviticus was designed by the Hebrew ruler to be extended to Christians, is very disputable, when we recollect that Jesus Christ approved of the exception in Deuteronomy in his answer to the Sadducees, who had proposed that law to him. From the circumstance, however, of Christian monarchs having adopted the Levitical law into their respective codes, Henry's marriage with his brother's widow was naturally enough considered as a very unusual case, if not without precedent; but there were the bull of Pope Julius II, and the decision of the king's council, to sanction the union; and so little did the highest authority of the church question the validity of this dispensation, that he goes the length of declaring that the marriage would be lawful even if the nuptials of Arthur and Catharine had been consummated. Burnett and other defenders of Henry's cause, of course, make light of this dispensation; but the reasoning appears to us very defective which would withhold from the head of the church the power of dispensing with a regulation which, in all likelihood, the church framed for its members. Burnett, too, acted as wisely in disregarding this dispensation, as in his circumstantial account of the completion of the nuptials of Arthur and Catharine; for it could scarcely escape the common sense of our

" "And Judah said unto Onan, Go in unto thy brother's wife, and marry her, and raise up seed to thy brother."—GEN. chap. xxxviii, 8. "If brethren dwell together, and one of them die and have no child, the wife of the dead shall not marry without unto a stranger; her husband's brother shall go in unto her, and take her to him to wife, and perform the duty of an husband's brother unto her."—DEUT. xxv, 5.

" "Thou shalt not uncover the nakedness of thy brother's wife: it is thy brother's nakedness."—LEV. xviii, 16. Calvin has endeavoured to account for the discrepancy between DEUT. xxv, 5, and the text just quoted, by interpreting the word brother as a near kinsman; but there is too much of hypothesis and assumption in this explanation for any confidence to be attached to it. Before we arrive at this result, we must get over the case of the seven brethren mentioned in the gospels, which every one must see is impossible.

historian that, unless there was a marriage in fact, Henry's plea for a dissolution of the contract between himself and Catharine, on the ground of a scrupulous conscience, must have been done away with entirely. Very evident, however, does it appear to us, that if Henry had never gazed on the loveliness of Anne Boleyn, he never would have agitated the lawfulness of his first marriage. Burnett, then, sets himself to swim against the stream of public opinion, when he endeavours to persuade his readers that the cause of Henry's remorse for his first nuptials was occasioned by Thomas Aquinas,¹⁷ the king's favorite author, who held the Levitical law to be of moral and permanent obligation. The "angelic doctor," as he is styled by the disputants of the schools, and who is said, by a modern historian, to have "the rare merit of combining great perspicuity and purity of expression, with all the refined distinctions and speculations of the schoolmen," no doubt served him with arguments and quirks how best to support a bad cause; but his dictum would not have weighed a feather with Henry if his licentious passions¹⁸—if the queen's being six years older than himself, unlikely to bear him any more children, and her person disagreeable to him, from the many infirmities to which she was subject, had not first been virtually subversive of those memorable words of our Saviour, "and I say unto you, who.

¹⁷ Turner, *Hist. of England*, vol. ii, p. 583. The writings of that voluminous author ("ses ouvrages," says Dupin, "composent 17 tomes, in folio"), were so popular among the ultra popish party, as to become a sort of textuary with them. Dean Colet, a *nomen memorabile* with us, appears to have formed more sound conclusions respecting this oracle of the schoolmen. "I said somewhat more in praise of Aquinas: he (Colet) looked wistfully upon me, to observe whether I spoke in jest or earnest: he raised himself into some warmth, and said, 'why are you so fond of commending that schoolman who, without a great deal of arrogance, could never have reduced all things into such positive and dogmatical definitions; and without too much of a worldly spirit he could never have so much corrupted and defiled the pure doctrine of the Gospel with his mixture of prophane philosophy. I admired this freedom of Colet in censuring the head and father of the Thomists, and it made me look a little more narrowly into the writings of that celebrated schoolman, which, when I had done, it abated very much of my former esteem for him.'—Knight's *Erasmus*, 49.

¹⁸ Every check he received to them only gave additional intensity to his desire for their realization. His pen was incessantly in his hand on the affair of his divorce. Besides being in continual correspondence on this subject with his ministers at home and abroad, he composed a short treatise on the Levitical degrees, to shew the unlawfulness of his marriage. Alluding to his performance in one of his letters to Anne, he says, "that his book maketh substantially for his purpose, and that he has been writing it four hours that day."—Hearne's *Avesbury*, p. 360.

soever shall put away his wife, except it be for fornication, and shall marry another, committeth adultery—words to which the Dominican friar, and the rest of the canonists, jurists, and divines, consulted on this occasion, could, with all their latitude of interpretation, attach no other meaning than this, that the nuptial bond was indissoluble, when not violated by adultery. Upon Pope Clement resolving not to be accessory to the degradation of Queen Catharine, Henry ventured upon the perilous experiment of obtaining the opinion of the universities of Europe,³⁹ as to whether a brother may lawfully marry a brother's widow. And, that they might respond in the negative, money was plentifully distributed among them by his agents. In one of his letters, Clement asserts that the most undue influence was used with these public bodies to bring them over to the king's cause. Burnett, however, is anxious to demonstrate to us that no bribes ever touched the hands of these foreign doctors. In his proofs, among other flaws, is this: that he himself allows that some of the cardinals were bribed by Henry's ambassador, both in 1528 and in 1532. Burnett, also, can yield so far to his own prejudice as to disbelieve that the king menaced the universities, in case of their not subscribing to his wishes. But it would have been any thing short of insanity to battle with such a being for conscience sake, after three such letters as they had received from him; for had they been more fixed than they were in their attitude of defiance, one of these epistles, considering the character of the writer, would have been quite sufficient to awe them into complete submission. That the decision of these learned doctors, had no effect in lessening the aversion of the women of England to the divorce, the consciousness of which is said to have been so annoying to Henry, is quite evident from the following passage of Hall:—"All wise men in the realm much abhorred that marriage; *but women*, and such as were more wilful than wise or learned, spake against the determination, and said that the universities were corrupt and enticed so to do."

We are almost afraid that the candid enquirer, solicitous only after truth, will be apt to suspect that Burnett's treatment of Catharine's noble and affecting speech before the papal legates as a fiction, is assignable to no other reason than that it makes his hero the exemplification of everything that is unfeeling in tyranny. For the story of her behaviour on this occasion, which is immortalized by

³⁹ Most readers must be aware that the credit is usually ascribed to Crammer of having first given this piece of advice to Henry; but, according to an authority in Wordsworth's *Eccles. Biog.*, p. 437, it is due to Wolsey.

our Shakespeare, we have the authority of Cavendish and Hall.⁴⁰ Burnett, however, in his supplemental volume, discredits their statements on the authority of the original register of the trial, showing that the queen never came into court but once, June 18th, 1589, to read a paper, protesting against the jurisdiction; and that the king did not appear at all. But our historian here has fallen into an important oversight; by forgetting that he has printed a letter in his first volume, in which Henry says, "on that day we and the queen appeared in person," and he adds "after her departure was thrice preconsate, and called eftsoons to return; and on her refusal, a citation was decerned for her appearance on Friday next."

A broader mark for censure Burnett set up for himself by passing over in silence the inhuman denial of Henry to his divorced wife, to see their daughter before she breathed her last;⁴¹ from whose society she had been separated, that Mary might not become infected with the errors of popery. Well might the blameless Catharine exclaim, in one of her letters to Mary, "that we never come to the kingdom of God but by troubles."

The assertion that Mary Boleyn, the elder sister of Anne, was one of Henry's mistresses, is stoutly denied by Burnett. He unceremoniously designates it "as a forgery of Cardinal Pole's, which Sanders caught to dress up the scene." Now, the assertion is such an enormity that, before it be admitted, the presumption for it ought to be most conclusive. Mr. Hallam and Sir James Mackintosh both concur in procuring a verdict in favour of the king: but we have the misfortune to differ from these high authorities.

⁴⁰ When Henry perceived the powerful impression which she had made on her auditors, we are told by Hall, who was present, and who declares that "he gives the king's words as near as his writ could bear them away," that this was his reply. "I assure you all she is a woman of most gentleness, of most humility, and of buxomness, yea, and of all good qualities appertaining to nobility, she is without comparison, as I this twenty years almost have had the truest experiment. So that if I were to marry again, if the marriage might be good, I would surely chuse her above all other women." This last sentence must have cost a very severe effort to the Legatine judges, to restrain their countenances from mutual expressions of incredulity.

⁴¹ "Cum hoc idem filia cum lachrymis postularet, mater vix extremum spiritum ducens flagitaret, quod hostis nisi crudelissimus nunquam negasset, conjunx a viro mater pro filia, impetrare non potuit nec hanc quidem consolationem, in extremo spiritu dare voluit."—*Poli. Apol. at Carol.* Yet could that miracle of conjugal meekness and attachment thus address a note on her death-bed, to the destroyer of her health and happiness: "To her most dear lord and king."

True it is, that the evidence of the connexion between Mary and Henry rests solely on the authority of Pole, whose disposition to calumniate the king, and to heap the most ignominious terms on the two sisters, were equally manifest, and which his exiled condition permitted him to do with impunity. But still, as Pole's character has descended to posterity, if not endowed with the highest virtues, free, at least, from the suspicion of knowingly publishing any falsehood; we should almost be led to infer, from this fact alone, that there are very sufficient reasons for believing his assertions⁴² that Henry first seduced Mary, and afterwards retained her as his mistress, ignorant as we may be of the precise time of this connexion.

There are, likewise, other circumstances of such strong collateral evidence, as incline us to admit the trust-worthiness of the cardinal's testimony on this occasion. Mary had a striking proof before her, in the person of the Lady Elizabeth Tailboys—who was afterwards married to Edward Lord Clinton—that to be the mistress of the king had no other ill effect but to encourage the growth of ambitious feelings. The issue of this unlawful amour was a son, whom his royal parent made a knight of the garter, and called him Lord Henry Fitzroy, when little more than six years old, and afterwards, successively created him Earl of Nottingham, and Duke of Richmond and Somerset. "Nor were these all the favours," says Heylin, "intended to him, the crown itself being designed him by the king, in default of lawful issue, to be procreated and begotten of his royal body." To imagine that these splendid results of a licentious passion had no tendency to impress Mary with the conviction that unlimited obedience to the wishes of her handsome sovereign⁴³ was the duty of the subject, is to forget the frailty of female nature, and to forget also that the period the least favourable to domestic virtue is the reign of a king "whose brutal lusts spare no woman that is the object of it."

⁴² Dr. Lingard observes, in a note, "that the reluctance of Burnett to acknowledge Mary as one of the king's mistresses must yield to the repeated assertions of Pole, in his private letter to Henry, written in 1536." In the latter part of this assertion, the doctor has committed a great mistake. It was not in a private letter, but in his work on the unity of the church, addressed to Henry himself, and penned by his express command, that he made the charge against him of having debauched Mary Boleyn.

⁴³ "As all recommendable parts concurred in his person," says Lord Herbert, "and they again were exalted in his high dignity and valour, so it must seem less strange if, amid the many fair ladies which lived in his court, he both gave and received temptation."—*Hist. of Henry VIII.*, p. 175.

Perhaps it may be argued that the silence of Henry and of contemporary writers—with the exception of one, a decided enemy to the whole race of Boleyn—ought to turn the scale against an hypothesis so insulting to that family. But, if under a free government it is not always safe to arraign the character and vices of its ruler, under an absolute monarchy, such as ours was in the time of Henry, the court chronicler or satirist, with great reason, might dread that the slightest insinuation against royal seduction, and the fickleness of royal attachments, would be punished with the forfeiture of his head. Nor does the well-known circumstance of Anne's determination not to fluctuate between the state of a wife and the shame of a concubine, at all lessen the credibility of her sister's fall; since it would more powerfully impress the salutary caution on her mind that, however dangerous it might be to resist, it was only by a steady course of resistance, by being "cunning in her chastity," to use a quaint phrase of Fuller, that she would realize her ambition of becoming Queen of England.⁴⁴

⁴⁴ Pole was afraid even to trust himself to the friendship of Henry; yet while he admits that Anne preserved her virtue to the last, or at least to the last year, he grudges to allow her any merit, when she is entitled to the highest, for having so long maintained her honor against the incessant opportunities and importunities of the lustful king." *Concubina enim tua fieri, pudica mulier nollebat, Uxor volebat. Illa cujus amore rex depirebat, pertinacissime negabat sui corporis protestatem nisi matrimonio conjunctam, se illi unquam facturam.*—*Poliad Reg. Scot.* p. 176.

M.R.S.L.

(To be concluded in our next number).

ROBESPIERRE ;

HIS PRINCIPLES AND CHARACTER.

Those whose opinions are opposed to the French Revolution frequently express their abhorrence of it by pronouncing the single word *Robespierre*. Those, on the other hand, who entertain more favourable views of that great convulsion, identify his name with the calamities and bloodshed attending it, which, however, they conceive, are also to be ascribed to the profligacy of the aristocracy, the intrigues of courtiers, the unconquerable vanity of the nobility, and the despotic interference of foreign courts.

Robespierre, indignantly disowned by all the conflicting parties of the day, each of which desired to stigmatize its opponents by thrusting him into their ranks, stands alone in terrific solitude amidst the agitated masses of the Revolution : he who, nevertheless, when in the zenith of his power, controlling the destinies of men, was ardently adored by some and countenanced by all. His habits, pursuits, and disposition, not assimilating with those of his contemporaries, Robespierre may be said to have been the only chief who, though not identified with any party, directed the great revolutionary torrent. This will be apprehended more easily when we compare the man with the elements by which he was surrounded ; the projects he contemplated, with the means employed to carry them into effect ; and the ultimate consequences which followed them. The unbounded esteem with which he was regarded by his adherents, and the execration attached to his name in the pages of history, when duly considered, can scarcely fail to assist the impartial inquirer in forming a just opinion of his character and designs, at the same time that it may, possibly, in some measure, relieve his memory from the most serious imputation of having wantonly deluged the country with the blood of its children.

The passions of the head, as displayed in the youth, formed likewise the prominent and characteristic feature of the man ; for so those ideas may be designated which, like deep-rooted sensual inclinations, exercise an uncontrolled sovereignty over the will, acquiring strength slowly, yet by sure and certain steps. The passions of the head, concentrated as they are within the range of the thoughts and imagination, are imperceptible ; while the passions of the heart take root in practical life, amidst the intercourse of a boisterous world. Again, the passions of the head are instant in their effects,

there being but one step even to madness itself ; while the passions of the heart insinuate themselves by degrees into the system, first giving rise to mere thoughtlessness and errors of a pardonable nature, but by a thousand gradations, scarcely perceptible and still less noticed, leading the unhappy victim to commit crimes of the most heinous description.

Fabulous statements, impeaching the conduct of the youthful Robespierre, were eagerly sought after, and made available, by way of inference, in accounting for the bloodthirsty and atrocious crimes of his manhood ; but even in those days of anarchy and degeneracy when fierce party spirit was indulged to excess, and malignant calumnies were freely circulated, his most inveterate enemies in the Constitutional Assembly cast no reproach on him : indeed, the most scrupulous and searching inquiries, instituted after his death, revealed nothing authentic regarding his private life. All that has been satisfactorily ascertained, with respect to the early days of Robespierre, is, that he was born at Arras, where his education was superintended by a person celebrated for his talents, but who took no part in the Revolution ; that he was distinguished as well by intense application to his studies as by the integrity of his conduct, subsequently taking his rank among the most eminent lawyers there, and being remarkable for loyalty, activity, and disinterestedness in his professional pursuits. His social intercourse was confined to the fathers of the oratorio, with whom he usually dined once a week, and conversed on literary topics.

Robespierre is described, in a collection of memoirs* published before the Revolution, under the title of *Memoires Secrets*, to be a young, eloquent, and talented lawyer, who was sure eminently to distinguish himself in his profession. At the age of thirty, he was elected, by the community of his native place, deputy to the States Assembly, who commenced their proceedings in 1789. The very first words he uttered on that occasion breathed forth the purest and most determined republicanism, which pervaded every act and thought of his subsequent life : indeed, he eagerly sought opportunities to promulgate these his opinions, especially during discussions touching the introduction of a constitutional monarchy. At first the ministers of the crown disregarded him, holding out neither bribe, nor other inducement, to his becoming a convert to their party ; but when they afterwards needed his co-operation they were

* *Toulougeon piéces justificatives*, in the second volume of his *History of the Revolution*.

astonished to find his political honesty impregnable, and that his principles were not, in the slightest degree, to be shaken. Charles Elie Marquis de Ferrière, who was decidedly hostile to the Revolution, makes the following observations in his *Memoires*, with respect to the character borne by Robespierre at this period. "Some were of opinion that he acted from conviction; and even those who were opposed to him believed that he was an honest man, attributing to inexperience of the world, and non-acquaintance with the economy of governments, those crude notions by which he confounded law with despotism, and liberty with licentiousness. It is true," he adds, "that those best informed on the subject considered Robespierre to be a scoundrel, influenced entirely by selfish motives, &c.:" but personalities have been invariably substituted for arguments by the representatives of factions; consequently, the sources whence this unfavourable deduction was drawn are no where discoverable. By a resolution of the Constitutional Assembly, which Robespierre much contributed to carry into effect, the members of that body were rendered ineligible to the *Legislative Assembly*, which was about to supersede it; and Robespierre, having declined offers of many valuable appointments under the government,* returned to Arras as poor as he had left it in 1789. This circumstance alone clearly demonstrates the sincerity of his professions, affording also a most convincing proof that his vision, as to the future, was by no means obscured, and that he could anticipate coming events with greater facility than those who exulted in a more extensive experience of the world.

The circumstances which enabled Robespierre to establish himself in supreme power on the 31st of March, 1793, are too well known to need repetition in this place; but it will nevertheless be desirable to ascertain, if it be possible, the specific influence which he exercised over his fellow-countrymen; all who attentively watch the progress of events, during his reign of terror, being forcibly struck with the apparent inadequacy of the means at his command to effect the object which he endeavoured to attain: the question, then, is, What sort of influence was his? Bailleul† says, "It is a question which will puzzle all historians." This observation may be just as regards those historians whose researches extend no further than to define the engine, in its practical and external sense, by which whole nations are set in motion; but we shall make an

* Bonnet, *Essai sur l'Art de Faire les Révolutions Utiles*.

† In his work on Madame de Stael.

effort to solve the point, by dealing with it in its more comprehensive character. Thus, the inquiry presents itself, Who was this mysterious man, and how did he rise paramount over his contemporaries? He was deficient in those personal attractions which impose upon the senses, as well as in those brilliant talents which seduce the understanding. He possessed neither those virtues by which the esteem of others is ensured, nor were his vices, before his ascent to power, of so odious a description as to constitute him a mere votary to crime. Yet the weight of his popularity infinitely exceeded that possessed by all those who could boast of an indefinite proportion of these powerful allurements.

The noble and frank features of Lafayette, the blooming youth of Lamotte, and the graceful figure of Barrere, failed not to ensure a hearty welcome whenever they presented themselves, during their harangues, before the people. But far otherwise was it with Robespierre, whose repulsive exterior formed but too conclusive an index of his inward man. His stature was stunted, and his figure slender, moving with a graceless and irregular gait, sometimes with rapidity, at others with particularly measured steps. His was the very countenance to which Julius Cæsar was known to have entertained a strong and unconquerable aversion : with an eye ever restless, betraying an austere and crabbed disposition, yet not exhibiting sufficient firmness to encounter that of a foe, his complexion was sallow and bilious, his features being entirely devoid of expression, and never animated or flushed by mental impulses. He was incapable of assuming either the grand and imposing attitude of the lion, or the awful and terrific crouch of the tiger ; but, like the irritated viper, he was merely repulsive. Add to all this a certain foppishness of dress, worthy of a courtier, and calculated to disfigure even a handsome man, and Robespierre's picture is complete. Yet are we tempted to overlook these his follies, whilst contemplating the courage and energy he displayed, even whilst indulging these vanities, at a period when innocence found safety only by encircling herself in the lewd and disorderly garb of debauchery, and wealth protection, when clad in the disgusting rags of indigence. He alone appeared in public well-dressed, clean, and adorned with all the fashionable fineries of the banished nobility. Whilst Condorcet found it necessary to remind the tribunes that "he too belonged to the Sansculottes," and Marat thought it expedient, in order to maintain his popularity, to appear in the Chamber of Deputies, clothed in a tattered frock coat, in wooden shoes, with his head enveloped in a dirty handkerchief, and, stretching himself on the benches, used vulgar

language and low wit, as suitable to his appearance, Robespierre was attired as a modern dandy, and played the part of the king of the Sansculottes.

Robespierre's eloquence was as little calculated to command attention as his external appearance. The inexhaustible flow of grand and exalted ideas for which Mirabeau was distinguished, the attractive energy with which Barrere spoke, and the masterly elocution of Vergniaud, were unknown to him. Robespierre spoke with violent gesture of manner, but in other respects without animation, occupying much time in delivering his sentiments, which were, on that account, not the less incomprehensible, and evincing but a scanty supply of thoughts, more attributable, it is presumed, to the predominance of some fixed ideas, than to ignorance or tardiness of perception; and the events of the Revolution, as connected with himself, being the topic on which he dilated with tedious uniformity. He ranked only amongst the third or fourth-rate speakers whilst a member of the Constitutional Assembly. Yet, in perusing his speeches, we discover many passages exhibiting a high order of eloquence, and discovering such astonishing penetration, as to the future state of the Republic, as to induce us to impute to stratagem and sinister views the obscurity in which he frequently involved his expressions, namely, that he might, in the first place, fatigue and confuse his auditors, and then, by bursting with the rapidity of lightning on their imaginations, rivet their attention with some novel proposition, which he would have failed to enforce by a less energetic appeal to their feelings and passions.

Many clung to Robespierre with a degree of enthusiasm little removed from adoration; but no one regarded him by the closer ties of esteem, or with the warmth of private friendship—feelings which he himself considered ephemeral, to be sported with in the game of life as occasion might suggest, but which were allowed no place within his own breast. He possessed sufficient power to inflame the head, but the heart that approached him shrunk back wounded and alarmed by his chilling reserve. His sister's letters,* found after his death, furnish melancholy proofs that the mind of that singular man, half maddened by strange notions respecting the organisation of society, became utterly callous and indifferent to the pangs which he inflicted even on the susceptible feelings of a woman, her tenderest attachment being neither heeded nor understood. Fanaticism deadens the heart, as depravity blunts the senses. If,

* Reports of Courtois.

however, it be true* that, having once loved, his advances were rejected, it is not quite so surprising that the tender feelings of nature were not again permitted, by a person so reserved and sullen, to interfere with his grand objects.

Holding no opinions in common with his contemporaries, and in no wise consulting their tastes or desires, he did not even participate in those vices which were calculated to gratify the popular taste. The covetous did not find in him an Orleans, nor the ambitious a Bonaparte: his proceedings thwarted the plans, and confounded the projects of the wicked, and enshrouded the hopes and views of the virtuous in midnight darkness. Gold had no power over him; so that the people honoured him by the appellation of the "unpurchasable"—a title to which his bitterest enemies dared not dispute his claim, and to which posterity will attach more importance than to the high-sounding title of majesty itself, when borne by a despotic monarch. He died at Paris, in the same indigent circumstances in which he had arrived there, the state of the national treasury bearing ample testimony to the disinterestedness with which he administered its affairs, at the very moment when Courtois, trying his skill in the rostrum, painted—the then defunct—Robespierre in the most odious and hateful colours. Every portion of the moveable property of those who breathed their last on the scaffold was found untouched, and in the same state as when first confided to Robespierre's care; so that it was scarcely necessary for the respective claimants minutely to describe the effects themselves, but merely to specify the cover in which they were enveloped, to insure the safe return of the most trifling article.

He was sober and industrious, and his morals were strict even to severity. He was not idolized by the bon vivants, neither regaling his adherents, as Danton was wont to do, nor entering with them into the mere sensual enjoyments of life. The dwelling, table, and dress, of the ruler of France, were of the same humble and unpretending description which characterized those of the poor lawyer of Arras. He lodged and boarded with the family of a cabinet-maker, Dupleix—who, we believe, is still living—in the street St. Honore, not far from the Church of the Assumption.

At a time when the higher classes, in their base hypocrisy, were engaged in kindling the torch of civil war, through the instrumentality of a religion in which they themselves placed no credence—

* *Memoires historiques sur la vie de Suard*, etc., par Dominique Joseph Gerat. Paris, 1820.

when the bishops excited the people to discord and dissension in their pastoral epistles—when Chaumette published his religious creed, and Jacob Dumont taught atheism—Robespierre's religious tenets were rigorous even to superstition, though he did not conform to the discipline of his own church. He outlawed all disbelievers in the supreme power and moral influence of God; and on one occasion only was his dark and forbidding visage known to shed forth one ray of light, namely, when he proclaimed, at the head of the National Convention, the existence and dominion of a Supreme Being.

This religious zeal, however, was but ill calculated to arm its possessor with authority amidst tumult, outrage, and fierce party contentions, when men were borne along in masses, as if by a gregarious impulse, under the influence of the popular cry—at such a period, a resolute front is needed more than deliberation, and personal courage is far more efficacious, in checking the excesses of the multitude, than brooding over or planning enterprises on paper or in the cabinet. Of that personal courage Robespierre was utterly deficient. It is true, he possessed fortitude of the head to an almost unlimited extent—if we may so term that inflexible and unrelenting stubbornness of purpose which urges on to the execution of any project, however horrible in itself, or perilous in the undertaking; but to that courage of the heart which bravely encounters physical dangers, and rouses the dormant energies of the multitude in leading them to action, where success depends upon might, and not upon argument, as we have before said, he was an entire stranger. It is this personal courage which enables men even of indifferent talents to gain a ready ascendancy over, and to subdue the most tumultuous assembly. The possession of this qualification, in an eminent degree, obtained for Thionville and Danton an equal share with Robespierre in the affections of the people. There is only one opinion with respect to Robespierre's cowardice. At all seasons of extreme peril—such as the 21st of June, 10th of August, &c.—he secreted himself from the public view, the movements of the people being directed by men possessing a greater share of courage. No sooner, however, had the blood ceased to flow and the tumult subsided, than he again placed himself at the head of affairs, assuming all the importance and authority of one who had just then distinguished himself by his bravery, and to whose generalship and strength of arm the success of the day was attributable, those who had in reality borne the heat and brunt of the battle, being treated by him merely as subordinate officers.

The projects and desires of Robespierre were as little compatible with the inclinations and tastes of his people, as the measures he adopted were ill calculated to invest him with the sovereign authority, which he nevertheless succeeded in obtaining. There was no apparent unity of purpose between his contemporaries and himself; and no sooner was the veil withdrawn, by which his real objects were concealed from their view, than his fall was doomed; and then, as if ashamed of their puerile submission to the will and dictation of a man of low degree, whose objects and desires they neither partook of nor comprehended, they sought escape from their disgraceful position by misrepresenting the feelings by which Robespierre was influenced, involving his character and designs in dark obscurity, by which history has sustained an almost irremediable injury, and readers have been hitherto grossly misled and deceived on this most interesting and all-important subject.

The prevailing opinion appears still to be, that the (so called) *Reign of Terror* was of a negative character, abrogating all laws, giving rise to unlimited indulgence in licentious passions, and gross individual depravity, and breaking asunder the bonds of social order. But whatever may have been the disposition of the multitude, and however immoderate the excesses into which they plunged, it is clear that Robespierre did not enter into their feelings, and still less was his conduct influenced by their views. And, indeed, why should Robespierre attempt to demolish all the restraints of morality, who never felt their salutary influence? Why should he, who never indulged in corrupt and unrestrained revelry, either for his own gratification or to suit party taste, break down those protecting barriers which, whilst they sustain the vast fabric of society, restrain men within the sphere of a safe familiar intercourse? Again, how was it possible for a man to countenance these licentious indulgences, who considered every free and uncontrolled exercise of the will by others as tending to anti-revolutionary principles, regarding, at the same time, his own judgment, not only as infallible, but as being on a level with, if not superior to, the law itself? So far was the Reign of Terror from favouring, that it actually put a stop to those depraved and lawless habits of the people which had prevailed from the 10th of August. Robespierre did not introduce or promote anarchy and wild commotion as a part of his system; but by a decree, levelled against all suspected persons, carried in the Assembly of the National Representatives, after the destruction of the Girondines, he called forth a civil war novel in character, frightful in detail, and fearfully devastating in its effects, which, extending

itself into every province, town, and village, nay, even into every family, found therein its ready supporters, as well as its victims. In this instance, likewise, the fanatic seems to have anticipated future events with an instinctive foresight surpassing his coadjutors of the Assembly, who, after having assisted in bringing it into being, fell, by their irresolution, victims to their own decree. Indeed, every revolution is more or less a civil war, which, in its turn, readily assumes the character of, and engenders, a war of extermination, whenever it owes its origin, not to clashing interests, but to a difference of opinion. All attempts at reconciliation are then in vain, inasmuch as the process of political chemistry admits only, in that case, of the entire decomposition of the parts, not to the combination of the constituents.

That decree, by which the whole population of France was separated into two large and hostile bodies, the Patriots and Anti-revolutionists—ordaining that the former should be placed in surveillance over the latter—whilst it gave rise to hatred, suspicion, and bitter animosities, most effectually disarmed justice of its power and efficiency. Even the more discreet and sober-minded members of the Convention, as well as of the other ranks of society, contemplating the Revolution as the fore-runner of a war of extermination, which would necessarily involve the national rights, and assumed prerogatives of individuals, in fierce contention, imagined that, by giving effect to that decree, they would best afford protection to the former against the latter; and though they quickly discovered that thousands of well-disposed and peaceable persons were being sacrificed to the jealousy and strife to which it gave rise among the multitude, who betook themselves to arms, and resorted to violence, not so much from a deliberate conviction of its expediency as by their uncontrollable passions, yet were they impressed with the necessity of opposing to an attack so violent an equally forcible defence.

No disorder could arise from this state of affairs, which resembled a war superintended by the government, whose agents, the tribunals and the popular societies, being invested with unlimited power, calmed the public disposition to riot and outrage, superseding the necessity of, and surpassing in effect, well-disciplined military interference. These all-powerful revolutionary tribunals and societies were placed under the superintendence of the (so called) Committee of Safety; and Robespierre directed the proceedings of that body, of the Convent, and of the Club of the Jacobins. The *Reign of Terror* must not, therefore, be considered as the characteristic

feature, but as an unavoidable consequence, arising out of the French Revolution.

It was Robespierre's *person* which marked the revolutionary struggle we are detailing with the peculiar stamp of *terror* which it then, for the first time, assumed, as distinguished from that which has been designated, through all ages, and in all countries, by the simple appellation of civil war and party fury. Madame de Stael said there was something awful about Robespierre, which inspired the public with imaginary fear of a deeper shade than was produced even by the cruel measures of government. But it was Bailleul who hit upon the most suitable appellation for that infernal period, which existed only so long as it bore the stamp of an enigma ; but no sooner did the Convent enter into the views of Robespierre, and solve that political problem, than the author, not unlike those monsters of whom we read in fairy tales, breathed his last, and vanished from the stage.

"Robespierre based," says Bailleul, in his *Exam. &c.* "the regeneration of society upon these two foundations—equality, and sovereignty of the people. Virtue, in the most comprehensive acceptation of the word, according to his interpretation, constituted the true essence of democracy ; and as he included amongst the opponents of virtue all those who derived any advantage from the abuses of a corrupt government—all selfish wealthy persons, the immoral poor, the unduly ambitious, and all those who were inimical to popular measures and equality—it naturally became a part of his system not only to cleanse society from these vices, but to exterminate the individuals in whom they had taken root. No sooner had Robespierre established this preliminary axiom than he inferred, with logical rectitude, that in peaceable times it is virtue alone which constitutes democracy, but that at revolutionary periods, and during civil war, terror must be added to virtue, in order to insure the uprightness of democracy. Terror, without virtue, would, therefore, prove as fatal, as virtue, without terror, would be powerless : terror being nothing more than strict, rigorous, and instant justice, as derivable from virtue itself.

"Robespierre," continues Bailleul, "being convinced of the sublimity and perfection of his views, in no wise resembled any of his coadjutors of the Revolution. They felt that they were opposed to an almost overwhelming storm, but nevertheless consoled themselves with the belief that the political fever would cease with its cause, while Robespierre, cool, calm, and collected, felt that he was in his natural element. He imagined that he could already discover vir-

ture gaining ground among the people ; and the innumerable victims which were everywhere presented to his view, made no other impression upon his feelings than as so many proofs of the rapid advances made by virtue, accounting himself a being who was sent into the world to become the lawgiver and teacher of nations. Hence his calmness, self-possession, and that mysterious *quelque-chose* in Robespierre, with which Madame de Stael was so forcibly struck."

The enthusiasm which had thus taken possession of Robespierre's mind, regarding the sublimity of his projects and mission, was not modified by experience and knowledge of the world ; and though all his contemporaries were, in some measure, infected by these chimerical delusions, they were nevertheless unable to comprehend their purport, and thus became his victims, instead of being, as they themselves imagined, his auxiliaries. Resolved to carry into practice those projects which he had some time meditated, and lending a willing ear to the denunciations of intriguers, by whom he was constantly surrounded, he prosecuted all those who bore meritorious distinctions, or who had risen to eminence in the country, as being derogatory to equality. In the Nivorse of the year II, he destroyed the last bulwark of innocence, and became the head of the *Gorgon* to all classes of society. There was not a single individual, suspected of any crime whatever, who was not arraigned before the bar of justice, as "an offender against the equality and sovereignty of the people"—a form of accusation used indiscriminately against all persons, whether pickpockets, prostitutes, burglars, or men of elevated rank of society : all were classed under the law of conspiracy against the people ; manifesting, at one view, the frightful and appalling extent to which the system was carried, and exciting the astonishment even of his own associates.

This state of affairs was but ill calculated to last ; as soon, therefore, as the system was understood by the nation, Robespierre, in desiring to realize what, in fact, was impossible—a sort of tribunal over the consciences of men, whereby moral failings were to be punished as if they had been political crimes—at length perceived that the bloody massacre in which his hands were imbrued, and the numberless victims who were daily sacrificed under the rigour of his principles, had excited the disgust of society, which no longer concealed its abhorrence of his projects ; and that the people, whose rights he was apparently engaged in defending, were inimical both to his person and views. This revelation excited his indignation, his suspicions henceforth having no limits, and his accusations being

directed against all whom he suspected of differing from him in opinion ; in short, he withdrew all confidence, even from his coadjutors, his fanaticism being now converted almost into madness. The members of the government, beholding with dismay the grievous evils which they had been instrumental in inflicting on the wretched nation, perceived, with fearful forebodings, that they also must sooner or later taste of the bitter cup which had been so deeply partaken of by their fellow-countrymen, if Robespierre was permitted longer to pursue his demoniac course.

Three-fourths of the nation, observes Bailleul, were already placed upon the proscription list when, happily for the country, Robespierre fell without even being arraigned at the bar of justice.

It is melancholy to reflect that the horrors of Robespierre's system experienced no check so long as victims for assassination were selected from the humble classes of the people, and that their author was doomed only to atone for his crimes, when the rich, covetous, and ambitious ranks of society, were included in his death warrants.

The whole of Robespierre's career—the Utopian Republic he intended to create, the calamities with which he oppressed the nation, and the manner in which he finally expiated his offences—are so explanatory of his most peculiar views, and of the motives by which he was actuated, that we need not have recourse to mere suppositions, which in no way elucidate doubts, or to inferences which in themselves may be contradictory.

The chief imputation cast on Robespierre, by his enemies, at the time of his downfall, was, that *he aimed at the dictatorship*—an accusation assuming “guilt against the equality and sovereignty of the people ;” by which they not only turned the edge of his own weapons against himself, but were enabled more satisfactorily to account for their former acquiescence in his views, as well as to make known their present disapproval of his projects. It is perfectly clear that Robespierre did not *aim* at the dictatorship, inasmuch as he already exercised it, though in a manner widely differing from the generality of despots. He resembled the founder of a *sect* more than of a *faction*, considering himself to be the reformer of abuses, the inculcator of virtue, and the revealer of a new system of policy !

A report was at one period prevalent, in Paris, that Robespierre contemplated marrying the daughter of Louis XVI. The overweening vanity of that man must indeed have been excessive, and his self-esteem of a truly exalted character, to render such an event even *probable*, in the estimation of his contemporaries, though we confess we encounter no great difficulty in reconciling to our

comprehension a union between the prophet of a new political revelation and the last scion of the chief of the ancient regime, at least in the wild and overstrained imagination of a fanatic who could entertain the absurd and futile hope that he should be enabled to produce the regeneration of society, and to constitute a jubilee of universal relationship and brotherhood.

However, this must be received as a mere report, the most scrupulous enquiries made by his contemporaries, within whose reach were the best sources of information, having failed to substantiate anything definite on the subject.

Another rumour was likewise industriously circulated, identifying Robespierre as the agent of some of the foreign courts, and especially of the cabinet of St. James. This originated in a letter which was found among his papers—as mentioned in the Report of Courtois—wherein an anonymous republican congratulates Robespierre on the success which had attended his revolutionary proceedings, and suggests the propriety of his retiring, after he should have struck a few more blows, into some foreign country, where he might enjoy in quiet his accumulated riches—the reward due to his merits—and there hold up to ridicule the fools of his own country: no rumour, indeed, seems to be more widely spread, but at the same time more devoid of credit. How possible is it that this letter was an impudent forgery, thrust among the other papers in order to aggravate the culpability of the deceased—a base and infamous expedient, suited to the period at which it was called into practice? It is even more than probable that this and other letters of a similar character were, *in fact*, anonymously addressed to him by his enemies, in the hope that they might be intercepted, and become the means of exciting suspicion as to his character in the public mind: indeed, the very tenor of the letter we have quoted betrays the malicious object of its author, who is so utterly shameless as to term “the accumulated riches,” *a reward due to his merits*, etc.

Political crimes are generally committed with much prudence, expertness, and tact; and when dealt with by state agents, and their subordinates, it is invariably under the plausible pretence, and with the philanthropic view, of promoting the public weal, that such *coercive steps* are taken, whilst selfish and private motives more frequently give birth to them.

So much vulgarity and grossness of style pervades the letter referred to in the Report of Courtois, that even the obdurate feelings of a pickpocket would be outraged by it: to how much greater an extent will this observation be considered applicable towards a man whose

bitterest enemies could discover no reason to impeach his integrity, or to question his unparalleled disinterestedness? Not the slightest trace of the treasures with which it was imputed that Robespierre enriched himself was discovered after his death, nor was any further proof established of his having maintained a correspondence with foreigners. He who sells his conscience, or barter away his conviction, does so for a valuable consideration ; but no one instance is discernible, in the whole character and conduct of Robespierre, wherein he betrayed any less worthy motive, or propensity, than to carry fully into practice his political principles ; and the very enthusiasm with which he pursued his object superseded and subdued all other inclinations and passions. If any doubt or security be still considered attached to the history of the Revolution, it undoubtedly is with respect to the influence exercised over Robespierre by *foreign* agents, whose *tool* he might possibly have been, but not their conscious accomplice.

The immense flow of blood which characterized the Reign of Terror, deluging the whole face of the land, and carrying with it dismay, disorder, and bitter lamentation among all classes, sects, and ages of the people, was undoubtedly calculated to excite the sympathy, and to revolt the feelings, of the most indulgent historian, who being unable or unwilling to attribute this dire affliction to any reasonable cause, felt a sort of gratification in imputing the monstrous phenomenon to a *purely brutal thirst for blood* in Robespierre. The members of the aristocracy, who were at all times disposed to act upon the opinion that the most deadly and vindictive calumnies were by no means ill bestowed, if levelled against those whom they considered their enemies—persons, likewise, of a religious turn of mind, who recognized in all those cruelties the free work of Satan himself, as well as journalists and historians, have all, in short, conspired to attach credence to that ill-founded and unjust hypothesis, which has at length become so prevalent as to bias the judgment, and prejudice the understanding, of even the most impartial and liberal inquirer.

The propensity to shed blood, according to the opinion of naturalists, is inherent in the lowest order of animal life, and is peculiarly distinguishable among insects ; neither is man himself, in whom is concentrated the instinctive genius of all the other creatures of the animal world, exonerated by historians from partaking largely in this most brutal propensity. The aristocracy in France first set this odious example, by converting into a species of amusement the tortures to which they subjected the lower classes of society, who,

having caught that brutal infection, finally luxuriated in the like ferocious pleasure. About the time of the Revolution, many hot-headed, and, what is still more disgraceful, many able writers, indulged in disgustingly licentious publications to such an extent as could not fail to contaminate the minds of general readers, as well as to be highly prejudicial to the well-being of society, by divulging and giving free circulation to the secrets of the *Boudoir*—a description of reading which, as it well accorded with depraved appetites, found numerous admirers among the people. Indeed, no reasonable doubt can be entertained, from the scenes which occurred at Nantes, in La Vendée, at Lyons, and Toulon, that even vast numbers of murders were committed, with no other object than to gratify a bloodthirsty inclination.

But Robespierre's enormities were quite of another character. His private life is universally admitted to have been highly moral and unimpeachable,* the numerous victims who were sacrificed during the Reign of Terror being in a few instances only known to or seen by him. Neither should we permit the fact to escape our present notice, that it was he who urged, with the most zealous perseverance, in the Constitutional Assembly, the propriety of totally abolishing capital punishment.

The wretched fate of the unhappy king was neither the offspring of Robespierre's conception, nor did it even meet with his sanction; but, on the contrary, it was Robespierre who, after Louis' unsuccessful flight, recommended that the catastrophe should be deferred, and that this act of leniency should be taken advantage of, in rendering the struggle between the aristocracy and the people—which had then become irreconcilable—less sanguinary, and more in the nature of open declared warfare, than as resulting from deep-laid stratagem.

All the members of the National Assembly who had but reluctantly resigned their aristocratic privileges, and still clung with persevering tenacity to their noble order, crowded once more around the monarch, and placed him, *bon gré mal gré*, at their head—a position which was invariably chosen for him, like a captive king among the Romans leading the triumphal processions—and the struggle, now assuming its true and legitimate character, finally

* Garat, *ibid*, says, "Robespierre que l'Europe croit voir à la tête de la Nation Française, vit dans la boutique d'un menuisier dont il aspire à être le fils; et ses mœurs sont décentes sans aucune affectation et sans aucune surveillance hypocrite sur lui même."

resolved itself into a contest of opinions. The fierce party strife existing between the aristocracy and the people being no longer, in the slightest degree, to be controlled, the members of the National Assembly endeavoured to moderate the virulence of the adverse factions by leading the monarch from the prison, where the public sympathy at least was extended to him, once more to the throne, which was shorn of all its former charms and splendour, save its giddy height, and where heart-burnings and dark suspicions constituted his only guard. The prophetic warning of Robespierre, conveyed in these words, "*Cæsar was assassinated because his person was inviolable,*" was but too strictly realised when the king, being sorely pressed on by all parties, found there was but one alternative, either entirely to suppress and subdue the Revolution itself, or to become its certain and hapless victim. Having been thus placed in the midst of the contending parties, he became, as it were, a target to the one and a shield to the other: all parties, therefore, may be said to have dipped their hands in his blood.

The mystery and doubt in which Robespierre's designs are involved admit of no elucidation, according to those ordinary rules by which human ambition is generally supposed to be guided; and all inferences being more or less involved in contradictions, we must be satisfied with the explanation afforded by Bailleul, to which we have already referred, which stands alone in bearing the test of investigation. We are still, however, at a loss to account for the success with which, for a long time, he pursued his resolution to found a new social institution among the people, who were neither able nor willing to enter into projects as little consonant with the feelings of the nation at large, as they were ill suited to the times in which they were proposed. It is true that all his measures, however severe, failed to exterminate the actual existing society, which was to be superseded by the ideal fraternity conceived in his fertile imagination; but he nevertheless shook the former to its very foundation, in a manner unparalleled in the history of nations. The question, then, which remains to be decided is, how or by what co-operating circumstances did he acquire and wield that unrestrained popular influence which enabled him to indulge his chimeras, and to carry devastation, fire, and sword, into the remotest corners of the land? We must here repeat that fickle nature had not endowed the poor lawyer of Arras with those dazzling talents and personal graces which, fastening on the attention, frequently extract an acquiescence from auditors before time has been afforded them duly to consider, and to argue, the subject in dispute. He governed

by terror, receiving no support from the love and attachment of the French people ; and yet it is as perfectly certain that he possessed the confidence of the mass to a far greater extent than even the most philanthropic monarchs ever commanded.

The true basis, however, on which his popularity rested, was *his own conviction of the feasibility of his designs*. Already, during the earliest sittings of the National Assembly, Mirabeau, the political prophet of that period, after silently listening to the unenlightened effusions of Robespierre, which were received with sneers by the other members, exclaimed "*That man will prevail, for he believes what he says*" (il ira loin, il croit ce qu'il dit). He derived much popular esteem, likewise, from the respectful language in which he invariably couched all observations having reference to the people, terming them the grand focus from whence all virtues flowed ; from the felicitous concord at all times existing between his words and actions : and the moral conviction he himself entertained of the justice of that creed by which he regarded all descriptions of moral delinquents as the people's foes. So firmly was his popularity established by these circumstances, that it was withdrawn from him only with his life, and his fall was compassed rather by surprise than by the more powerful influence of his opponents. Oelsner, a German writer, who was an eye-witness of all the revolutionary scenes in the capital, thus speaks of Robespierre :—"The people were so convinced of his honesty, that they could have actually seen him pick pockets, and yet would have been but ill disposed to confide in the correctness of their own vision."

In like manner, Burke explains the popularity of the Jacobins, when he says* that the Jacobin Revolution is the offspring of men neither elevated in rank nor meriting esteem—of a wild and impetuous temper and disposition—full of levity, arrogance, and presumption—and as destitute of any governing moral principles as of wisdom. Whence, then, did they derive that popular power and authority which, overcoming all obstacles, alarmed even the most resolute men ? From a qualification infinitely surpassing all others in worth—ENERGY OF PURPOSE ! It is to an unconquerable mental impulse, an enterprising spirit, but above all to the exercise of this energy of purpose, that men are indebted for the positions they hold, considering the confused and unsettled state of affairs in France.

Fanaticism is not to be acquired simply by resolution ; in other

words, a man cannot make up his mind to become a fanatic. Genuine enthusiasm, which in its rapid, but ill-directed, flight, terrifies and confounds its opponents, is intrinsically a part of, as it is originally acquired from, virtue—from, in fact, a moral conviction of being in the right: an impression so influential in awakening the dormant susceptibilities of its votaries, that it may become contagious when carried to unreasonable, and even to outrageous excess. Selfish motives, and that artificial circumscribed enthusiasm which is nearly allied to, if it does not wholly arise from, mere personal caprice, carry with them the germs of their own extinction. An egotist, who seeks his own personal gratification alone, may attain his object of corrupting or destroying; but he cannot, whilst pursuing this merely selfish course, kindle the mental powers, or influence the understanding, so as to *convince* the crowd: nay, it may be doubted whether he would be capable of rousing this spirit of enthusiasm even within his own breast. He may deceive the judgment, but he cannot by such means create within them the moral *conviction* of wrong. This assertion is verified in the historical narrations of all great revolutions, wherein the powerful voice of the people was raised in asserting and claiming their just rights, as distinguished from the arrogated prerogatives of the few: and this is more particularly remarkable in the events of the French Revolution.

Those feelings which lead us to aspire to freedom and equality are inherent in our nature, the latter being somewhat sanctioned by the Almighty himself, in whose eyes all are equal; and were it not for this influential moral conviction, which, when disturbed, electrifies whole nations, instinctively stimulating them to revolutionary actions, the great mass of the population would ever remain in a state of hopeless degradation, mere beasts of burden, governed by the absolute power, and lashed by the iron rod, of their despotic rulers. Revolutions are frequently grounded in justice, and are often forced on the people by circumstances of an urgent and imperative nature, having an injurious tendency only when the multitude, actuated by a fearful spirit of revenge and retaliatory fury, are no longer guided by reason, but forgetting the noble cause, and losing sight of the object desired, fasten, like a ferocious beast, on both friend and foe. It is true that reason at last checks the bloodshed, restoring both order and safety; but we must nevertheless lament the fatal march of events by which so many innocent victims are sacrificed to the popular frenzy; and moreover we cannot be insensible to the melancholy lesson thereby afforded—that the

least introduction of true principles is generally attended by heavy sacrifices, which are too frequently to be apprehended, either from the mismanagement or incompetency of those whom accident or circumstances have placed at the head of such momentous events.

How seldom do we find the requisite proportions of discretion and courage in men holding elevated rank and commanding positions in society ! and even though nature should originally have been lavish in her disposition of these invaluable endowments, yet may their beneficial effects be lessened or neutralized, by the education afterwards acquired at school, or by the force of example received in subsequent life. Ardent, youthful minds, but too frequently admit fanciful impressions at school, having no foundation in reason ; whilst worldly experience, obtained in maturer years, deadens the noble impulses of the heart, giving place to avaricious and selfish motives. Reason, it is true, suggests the course to be pursued amid the complicated affairs of practical life ; but man is too often deficient of resolution and energy to adopt her friendly admonitions : hence we see persons of distinguished rank and talents degrading themselves from that high position in society, which they are eminently qualified to fill, and damning their fair fame by entering into intrigues with the meanest and most disreputable characters, for the purpose of acquiring influence and extending the sphere of their operations. Imagination, when uncontrolled by the intellectual powers of the mind, gradually transforms man into an enthusiast, who, soaring on high, and luxuriating in the unbounded space of an ideal world, regardless of the habits and feelings of the people by whom he is surrounded, and setting at nought the spirit and temper of the age, expects his contemporaries to join in his aerial flight, though they neither possess the capacity to understand, nor the desire to indulge, such credulous fancies.

These elements, *reason* and *imagination*—the enlightening and animating principles, which conjunctively contribute to form the character usually designated “a great man”—were not discernible in an eminent degree among the leaders of the French Revolution : hence the disappointments and difficulties which encumbered the path of the wary, over-calculating Mirabeau, and those dire calamities which darkened the career of the fanatic Robespierre, whom we may justly term a *moral monster* !

It will not be uninteresting that we should trace to its origin the extraordinary notion, regarding the regeneration of society, which, in taking such complete hold of Robespierre’s imagination, prompted him to commit acts of atrocity little according with his moral cha-

racter and habits in private life ; and that we should extend our researches, likewise, into the psychological history of the rise and progress of those chimerical designs, as holding up a mirror to reformers of the present day, from which their own likenesses may be reflected (are form mania, more or less, pervading all countries at this moment), and likewise manifesting with what facility reforms may become prejudicial to the well-being of a nation, if due attention be not paid to their probable tendency and effects, whether they are suited to the wants and pursuits, and will be satisfactory to the feelings, of the people, for whose benefit they are designed.

Oelsner, to whom we have above alluded, relates an anecdote which throws considerable light on the workings of Robespierre's mind, in the early part of his political career. Robespierre, who was then a member of the Constitutional Assembly, being present at a party where, among other topics, the different forms of government which existed in the world became the subject of conversation, appeared to take little interest in the discussion, amusing himself by playing with a large dog belonging to one of the party : a sneer or contemptuous curl of the lip, however, was occasionally visible, showing that he was not wholly indifferent or a stranger to what was passing. At length, on being invited by one of the party to state his opinion, and acquaint them with what description of laws he would govern the French, if he were called upon to rule over them, he laconically replied, "*The Laws of Lycurgus.*" The astonishment of the company was indeed great when they heard a representative of the people avowing a political creed, not only in itself absurd, but altogether at variance with the known desires, feelings, and tastes of the nation ; and having enumerated their objections to Robespierre's positions, they pressed him to state the arguments on which his opinion was founded : but he was again engaged at play with the dog, and the same repulsive sneer, so peculiar to him, being repeated, was the only reply they could obtain.

In comparing this decisive and brief expression of his opinion with his speeches (especially those delivered when he held highly elevated positions and commanded corresponding influence), which abound with allusions to the civic virtues and heroic patriotism of the ancients, so well delineated in Plutarch, no doubt can be entertained that from early life he was impressed with the feasibility of his absurd and fatal desire to regenerate society, by having recourse not to progressive measures, but to a retrograde march of thousands of years, when civilization was scarcely in its dawn.

Athens, in the zenith of its glory, holding the proudest political

position among the nations, and celebrated for its exemplary civic virtues, did not contain more than ten thousand free citizens, the remainder of the population consisting of slaves, debased beyond description. Rome, that pattern of republics, was crowded with workhouses, wherein inhuman cruelties were perpetrated on the inmates, which can be fitly compared only to the torments endured in the bagnios at Constantinople. In the cold, heartless, and uncharitable *Civism*, was comprehended all the virtues of which the ancients could boast. It guaranteed the enjoyment of unlimited liberty, and the unrestrained exercise of sovereign power, to a few thousands, whilst it imposed extreme degradation, and hopeless misery, on the remaining millions, rendering the condition of our modern slaves comparatively enviable: such, indeed, was the rigour with which that civic virtue was carried into practice, that the more it was divested of humanity, the nearer the system was considered to approach perfection. The republics of the ancients afford, therefore, an example to be shunned, except by those politicians who despair of the progress of moral and intellectual refinement in society; or by fanatics who, in the extremity of their admiration and zeal, become insensible to the grievous calamities which must ensue, if a system so pregnant with mischief were applied to modern times.—Rousseau, though he well knew that the civism of the ancients was directly at variance with those sublime principles of Christianity out of which modern civilization has sprung, was nevertheless fully impressed with the conviction that the frailties of human nature would always incapacitate man from the attainment of those higher virtues, and was therefore satisfied to recommend to society the inferior institutions of early civilization. Robespierre, too, was far from being ignorant that the boasted liberty of the ancients was a privilege in which but a very small proportion of the community participated, falling far short of the freedom claimed by modern nations; yet was he ever impressed with the belief that this ancient civism was in itself most perfect. Even the more sober Montesquieu considered this ancient virtue as the sole moral principle best calculated to promote the welfare of the Republic: while the system acted, as if by a magic spell, on the chaotic brain of our fanatic, and conjured up in his imagination all the miraculous and heroic deeds of antiquity, whether historical or fabulous; and the word civism (patriotism) was considered so comprehensive by him, and presented to his mind so many virtues in various forms, and so well suited to all the exigencies of practical life, as to constitute perfection itself.

We cannot be surprised to find that the glimmering shadows of antiquity afforded so much food for contemplation to Robespierre, whilst thousands of the well-educated and sober-minded classes of society, even of the present day, cling with pertinacity to ancient institutions, which they would fain introduce in these modern times, had they Robespierre's power to do so. The laws, customs, and exploits of antiquity, being indelibly impressed upon our memory whilst at school, when the mind and heart are alike susceptible of the most noble and sublime impressions, we are led to suppose that the world in which we live, and all those human beings by whom we are surrounded, are endowed with virtues similar to those ascribed to the ancients ; but we have no sooner arrived at a mature age, and entered on the busy scenes of life, than, alas ! we find all our joyful anticipations to be deceptive and groundless : we nevertheless cherish the recollection of those happy days ; and as we have reason to be proud of them, so do we return to those feelings with satisfaction, for they were both genuine and human. The hopes may be belied by others, but the feelings are our own, and may be carefully fostered within our bosoms, despite the melancholy trials, numerous disappointments, and fatal vicissitudes of life.

All the states of Europe have more or less framed their moral and political institutions after the model of the Roman empire, in its decline ; and the multitudinous forms of despotism—from the pompous titles attached to majesty, as introduced by the senator Sextus Pacuvius, down to the assumption of divine authority, as claimed by Caligula—all the resources from which the state's revenues were derived—from the taxes already introduced by Caligula, extending to the civil laws of the Byzantines—together with all the ceremonies constituting court etiquette, and the proceedings of courts of law and justice, have been introduced into, and amalgamated with, the public affairs of the various modern states of Europe, to which they have proved as salutary as they were fatal to Rome. The various moral, legal, and political institutions which prevailed in Rome, when she was rapidly progressing towards her ruin, are studied by statesmen and men of business ; while the glorious and sublime events of her early days are cast into the shade, and treated as fit subjects of inquiry by schoolboys ! At school we read much of Lycurgus and Solon ; in practical life we take Justinian for our guide. At school we are impressed with the virtues of Epaminondas, Aristides, and Socrates ; whilst in after life we find it not less desirable to possess the wealth of a Seneca and the good fortune of a Sejanus.

Such being the impressions and theories which are instilled into our minds whilst pursuing our youthful studies—in direct opposition to those principles by which our conduct must of necessity be governed during our intercourse with society in after life—circumstances in their nature and tendency so contradictory would unavoidably give rise to dissensions and heart-burnings among the community, and shake the institutions of a state to their very foundation, but for habit and use, by which men's tastes become as readily reconciled to those things which *are*, as they are apt to lose sight of those things which *ought* to prevail. The changes of day and night, the revolutions of the planets, the returning seasons, and death itself—the most mysterious of all riddles—pass before us without leaving any impression on our minds, because our senses became accustomed to them long before we reflected on their nature. How can it, then, be expected that the great disproportions in society, as applied to persons and property, should produce in us a deeper impression? The defenceless state of the people, the corrupt proceedings of the government, of the courts of justice and their subordinates, the disregard shown to merit, and the promotion of individuals of mediocre talents and questionable character to rank and places of emolument, are as familiar to us as light and darkness: we have them every instant before our eyes; yet is our perception of the existence of such abuses weakened by their unceasing recurrence, as the never-failing manifestation of the workings, and constant contemplation of the wonders, of the creation, destroys the mental faculty of curiosity and inquiry.

But the laws of nature are eternal and immutable, whilst the statutes and institutions framed and established by men are as perishable as their authors; and no sooner has the spirit of life (or of the age) departed from those institutions, than all the efforts of succeeding generations to re-animate them, must be ineffectual. Hence the people lie groaning under the weight of an immoveable, inanimate mass of despotic decrees and regulations, which admit of as little amendment or reform as a dead body can be revived by physical remedies; and the struggle which ensues between the conservatives and the abolitionists must necessarily assume that blood-thirsty, barbarous, and uncompromising aspect, which characterized the events of the French Revolution, where the views and interests of the contending parties were so strikingly at variance.

In all countries whose institutions are, in some measure, reared on a free and enlightened basis—where the laws partake more or less of the imperishable spirit of liberty—those reforms in the esta-

blished order of things which are dictated by reason, and which time and circumstances render expedient, may enforce a change in, but will never lead to an entire overthrow of, the government ; all subjects in dispute between the people and those placed in authority admitting of easy and amicable adjustment. But in such a country as France, over which the iron hand of the fiercest despotism had been for ages extended, and where not even the rays of national liberty were permitted to illumine the prevailing darkness of barbarism, the people, being in ignorance of the true character of social liberty, are prone to confound licentiousness with freedom ; and the war which ensues between the combatants—the one worshipping a mummy, and the other indulging the most extravagantly fanciful and unattainable ideal chimeras—must be attended by the most lamentable digressions from the paths of rectitude and truth, inevitably producing those moral monsters of whom Robespierre will ever remain a lamentable specimen in the pages of history.

The feelings of the people of the Netherlands were strongly imbued with a spirit of liberty until its suppression under the absolute rule of Spain ; and when religious enthusiasm gave rise to a political war, the belligerents, ever keeping in view the object desired, disputed their ground by deliberate steps and with suitable measures, in no respect digressing into those extravagancies, or debasing themselves by committing those crimes, which disgraced the French Revolution, though the contest was protracted for thirty years. Similar observations may, with much propriety, be applied to the family war carried on between the houses of York and Lancaster, regarding the legitimate title to the throne of England, as established by the constitution, which, though damaged in its superstructure during the despotic reign of the Tudors, remained nevertheless unshaken in its foundation.

The Spaniards, likewise, have been at all times warmly attached to national liberty, guaranteed to them, in some measure, by the existence of the *Cortes*, who, notwithstanding their power was curtailed by the despôts immediately succeeding Charles V. nevertheless contrived to preserve, at least, the remnants of freedom, which have gradually taken root in the affections of the whole people ; and though the Spanish nation, at this moment, is divided against itself regarding the right of succession to the throne, and perseveres in a protracted civil war, which entails the severest calamities on the population, it has not hitherto assumed the fierce and inhuman character so peculiar to the French Revolution. The American Revolution, so celebrated for the mildness, purity, and patriotic zeal which marked its

progress, and will ever entitle it to honourable distinction in the annals of nations, finally, affords us the most conclusive evidence that when a people accustomed to liberty—by whom an ardent love of freedom is considered the brightest gem that can adorn the brow—fight for their rights, no opportunities are afforded to shallow-minded fanatics to indulge their wild and speculative fancies, neither will they be permitted to divert the people from their object, and involve both friend and foe in one common ruin.

AN ACCOUNT OF THE PROCEEDINGS OF THE FRENCH
GEOLOGICAL SOCIETY, DURING THEIR MEETING
AT PORRENTRUY, SEPTEMBER, 1838.

It will no doubt be a gratifying thing to all those who are either ruminating on, or anticipating, some great meeting of British savans, to hear that the method of managing such affairs seems pretty much the same on all occasions, and that the heinous offences of eating and drinking are not committed by Englishmen only, but also by French, Swiss, and German wise people, all of whom seem equally to enjoy the hospitable board and the cheerful bottle.

Trusting to be able to make out this point, though, I must own, rather in despair at the amount of geology that will be forthcoming, I proceed to give a narrative of a most amusing week that I spent this last autumn in the north-west of Switzerland, while journeying to the town of Porrentruy, during my short sojourn there, and in company with the members of the society, while making an expedition southwards—an expedition which resembled more the triumphal progress of some public characters, than the quiet and simple travel with which geologists are accustomed, hammer in hand, to visit and patiently examine an unknown or interesting district.

Before proceeding with my story in order, it may be as well to say a few words, both on the French Geological Society itself, and also on the place of meeting selected, the latter more especially, because it is in an out-of-the-way corner of Switzerland, very seldom visited by travellers, and many persons would not know whereabouts on the map to look for it. If, however, the reader will take

a map of Switzerland or France, and search in the north-western part of the Canton of Berne for a small piece of that canton which juts into France, and is surrounded by it on three sides, he may—provided his map is a good one—see there marked, in tolerably small letters, the name Porrentruy, or Pruntrut, for the latter is the German denomination. In other words, it may be mentioned as about seventy miles east of Besançon, and perhaps rather more than one hundred north of Lausanne. It is situated in one of the valleys of the Jura, enclosed by hills of moderate elevation, and is said (I know not with how great veracity) to exist rather by the smuggling propensities of its inhabitants, than by any trade or manufacture. At all events, there is very little of either of the latter to be observed. With this short notice, I must proceed to do justice to the French Geological Society.

This society, unlike most of those on the continent, is founded on an English model, that is to say, is very expensive to its members, and with the greatest liberality opens wide its arms to embrace all, whether natives or foreigners, who have no objection to paying sixty francs entrance fee, and thirty francs per annum besides. It is still in its youth, and can hardly be considered as very distinguished, although it certainly numbers among its members some of the most eminent continental and even English geologists, and has already published some useful papers. The society, besides its regular meetings, calls together its members annually at some town in France or its neighbourhood, choosing for a place of assembly some district interesting for its geology. It will now, perhaps, be understood how a French society happened to hold its meeting in Switzerland, and why a town otherwise quite unimportant should have been fixed on, because of its convenient distance from some of the most instructive secondary geology of France or any adjacent country.

In order to get to Porrentruy, I had (as I was making, at the time, Lausanne my head quarters) two roads open to me, the one by Berne, Soleure, and Délémont, by the diligence; the other by the valleys of the Jura, only practicable on foot. Being anxious to see the scenery within the ranges of those very interesting mountains, and being, moreover, a tolerable walker, I chose the latter, and, after a most interesting and instructive journey of nearly four days, arrived at my place of destination after most of the others, and while the business of the meeting was proceeding.

The valley in which Porrentruy is situated is not very extensive in its dimensions, either of length or breadth. Standing on the low

ridge which must be crossed in coming from the south, the eye reaches from one extremity to the other, and the little town of Porrentruy, and the village of Alle, about two miles and a half distant, look like two sentries keeping guard over the fertile hollow between them. A narrow and not very deep, but rather noisy, stream, is seen joining, by a kind of thread, the village to the town; and the high road runs along its banks beneath a pretty escarpment of some limestone rocks, which have probably been brought into their present state by the long-continued action of water. Descending from the ridge into the valley towards Porrentruy, the town is seen more plainly. It appears pretty and picturesque from a distance, as it is furnished with several of those little round Swiss towers, with conical caps on their tops, which are so well known and so effective in the mountain scenery of the country. Unfortunately, as is too often the case, a further acquaintance does not improve, or even confirm, the first impressions; and the perfection of knowledge to which I afterwards attained on the subject only left the following unbiassed account in my note-book:—"It is a walled, ancient place, with streets of dirty-looking badly-built houses, with churches and market-places to match; and is surrounded by some very useless defences, which could hardly detain any army half a day to destroy."

In a place like this, it may well be imagined that the arrival of forty or fifty persons at once would produce no slight effect. The inns were crowded; and it was only by certain judicious enquiries after eminent scientific persons, and an intimation that I desired to be *taken in* in a scientific sense only, that I managed to obtain half a bed-room and a whole bed. I must acknowledge that my appearance could not have been very prepossessing, as my idea of propriety in dress necessary to walking geologists is extremely low; and I was at that time practising my theory to the full extent, and looking as little like a gentleman as an utter neglect of the elegancies of the tailor, hatter, and shoemaker, could make me. As soon, however, as I obtained a room and lodging, I made myself as decent as the state of my wardrobe permitted, and went from hotel to inn, and from inn to public-house, enquiring after the people I expected, and whom I either already knew or had introductions to. I found very soon that none of the eminent French geologists had come, and that of those who were present all but one were engaged at a grand dinner then going on, and given to the society by the Canton of Berne. The one exception, however, was sufficient for me; and I found in M. Morelli, of Milan, an agreeable companion, and one who could give me just the information that I required. As I saw

no one else that night, and am not clever at describing the intricacies of a supper at the Table d'Hôte, with which I closed the day, I will at once pass on to the next morning, at a little before six o'clock, and start fairly on a geological expedition planned for the day, partly to enlighten the members as to the formations in the neighbourhood, and partly, perhaps, to prepare them for the solemnities of the approaching evening, when there was not only a dinner to be eaten, but also a ball to attend.

According to appointment, there was a considerable muster at "The College" soon after half-past five, and that in spite of a driving rain, which threatened complete discomfiture to every thing short of a Macintosh. The members present consisted of a motley group from almost all nations under heaven. Besides the French, Swiss, and Germans, who seemed to be about equal in number, there was a Russian, a Belgian, an American, and (when I appeared) an Englishman; and I must say that nothing could have exceeded the perfect cordiality and friendly feeling which seemed to animate every one, without exception, and united the whole party into one joyous brotherhood, determined to find amusement and, indeed, instruction, in every object and every incident that presented itself.

The only men of any European reputation present were, Dr. Louis Agassiz, of Neuchâtel, decidedly the first; Professor Studer, of Berne, a rising and very talented geologist; Professor Thurman, of Porrentruy, who has written a valuable memoir on that part of the Jura range in the Canton of Berne; M. d'Omalins d'Halloy, the author of a good work on geology, and who has studied his own country (Belgium) extremely well; and M. Oeninghausen, who some years ago made an expedition to England, and published works on the geology of our south-western coast. Besides these, and M. Braun, of Karlsruhe, a most excellent mineralogist, I cannot recal any names of note.

Let us now start upon our expedition, which was, we were told, to last till two or three o'clock, and show to us the valley of dislocation immediately south of Porrentruy, disclosing the geological series from the Portland oolite, on which the town stands, across the Kimmeridge clay, and through the coralline oolite and Oxford clay, to the great oolite.

Leaving the town and proceeding southwards, we began to rise gradually, and soon attained a moderate elevation, whence the chain of the Vosges in France, and the mountains of the Black Forest in Germany, formed a beautiful finish to the extensive prospect which opened upon us. I must remark here that I was astonished at the

really elegant outline which the range of the Vosges presented, and learnt for the first time that the valleys within the chain, and the general character of the country and its inhabitants, are as interesting, and even picturesque, as the scenery which attracts so many travellers to many parts of Switzerland and Germany. But this by the way, and as a hint to future travellers in the east of France.

Having stopped a little on this rising ground to collect our forces, which had been rather scattered, in consequence of a little foraging which had gone on in a village through which we had passed, we continued to ascend till we reached the principal summit of the Portland oolite, beyond which there is a very slight descent, and a narrow and inconsiderable valley, enclosed on the other side by the lower beds of the oolite, here lifted up, and forming the highest part of the ridge; while in the valley itself there occurs a bed of clay, probably identifiable with our Kimmeridge clay. To explain this appearance more clearly—and it is one of the effects of disturbance most frequent in this part of the Jura—let the reader imagine a succession of strata, of which the three uppermost are stone, clay, and stone, lifted up into a ridge by a force from below. It is not difficult to conceive that in binding thus a brittle stone, the upper bed, not defended by pressure from above, will break, and be exposed to very rapid degradation by atmospheric causes, when the effort which raised the mountain has ceased to act. Thus, after some time the broken capping of stone will be destroyed; the clay, which came next, being soft, is early washed away; and nothing remains but the part originally lowest, now forming a central ridge higher than the other beds. But, again, the capping of upper oolite we spoke of as broken, would only be much injured within a moderate distance of the line of extreme pressure, and therefore along the sides of the hill it would be more solid, and less liable to injury. Just so we find it: we have an irregular ridge, not so high as the central; then a valley, caused simply by the more rapid washing away of the clay than the stone beds; and lastly, in the centre, the stratum lowest in formation highest in accidental locality. This description of one very numerous class of disturbances in all hilly countries, especially the west of Switzerland and the east of France, may be useful to those not much accustomed to geological generalizations; and it need only be added that we have here described a simple case of “anticlinal axis,” a word in common use, but of which a direct explanation is hardly to be given without mathematics, although this indirect way, by example, may perhaps be clear.

It will be apparent, from all that has been said, that the inclina-

tion of the beds is exactly opposite on the two sides of the hill or ridge ; for it is just as if one took sheets of paper, and bent them so that the middle should be the highest part, when the sides would shelve away like the roof of a house, each in a different direction. But I am wandering dreadfully from my subject, although, as it was to see the little bit of geology I have been describing that the first part of the expedition was planned, I thought it right to make the most of my science when it could be introduced.

After having viewed the collocation of the beds, and the nature of the disturbance at Monturban—or Mont Terrible, as this remarkably unterrible spot is, by a rather absurd perversion of names, universally called—we returned a little, and went to visit a very curious gorge in the oolite, extremely narrow, and walled in on each side by perpendicular rocks, which occasionally projected more or less into the gorge, and almost closed the passage through it. Then, going on, we passed a tolerably thick bed of the Kimmeridge clay, and saw another singular appearance in the oolitic beds, where a sudden escarpment seemed to terminate a nearly flat table land of the Portland rock ; so that we came absolutely upon the overhanging edge of a precipice, and looked down perpendicularly more than a hundred feet, without having been aware, till the very moment of reaching the edge, that there was any change in the level of the ground.

Now this was undoubtedly a very interesting place : interesting in its geology, interesting in its picturesque beauty, interesting in the very extraordinary and really unusual abruptness of the escarpment. But (alas for human nature !) some of our party, with noses which, for acuteness of scent, might have made an Indian envious, discovered at no very great distance a small house, where a most substantial luncheon was prepared. Instantly was the geology, the picturesque, and the interesting, neglected ; and before many minutes were past our whole party were seated before some extempore tables, on benches of very questionable character, discussing with the most hearty good will a capital meal, which was not unnecessary, considering the labours we had undergone and those in prospect. As soon as appetite was satisfied, some Germans of our party began singing chorusses—a convivial practice, which they enjoy exceedingly. Before long, single songs were called for, and out of our heterogeneous assembly we mustered songs in at least three kinds of patois : one person danced a Tyrolese dance, accompanying himself with his own voice ; the Russian danced in the manner of his country : and the scene taking place in the parlour of a little

road-side public-house, the hammers, knapsacks, bags of all kinds, and other accoutrements, lying about; the costume and appearance of the people; every thing, in short, combined to make it one of the most extraordinary and amusing adventures I ever had. It was truly delightful, too, to see how completely every body threw himself into the fun of the thing, and seemed to enjoy it perfectly for its very absurdity.

After our singing was over, we marched forth again, and visited a bed of lias brought to the surface by a disturbance similar to that of Monturban, of which it almost forms a part; and when we had got satisfactory ideas and fossils on this point, we proceeded to view a bed of gypsum at no great distance, and then returned to Porrentruy by some carriages which had been ordered to attend us, and which we found at a neighbouring village. I should mention, by the way, that the weather had cleared, and that only the beginning and ending of our walk were rainy.

As we arrived at our hotel by about half-past three, and were not to dine till five, we had time to make our toilets, and prepare for a grand dinner given by the town in our honour, and followed by a ball. The dinner was, I am sorry to say, not the very best I had ever eaten; and I have the authority of French and German, Russian and Italian, Swiss and American, for calling it, as it really was, execrable. I am almost sorry to put it on record, the thing was done with such hearty good will; but the fact is undeniable. I should not forget, however, the giant of the table—a huge trout, nearly three feet long, brought in on a board because no dish could hold it, and as unfit to eat as extraordinary to look at. After dinner we were regaled with a geological dessert, consisting of *sucrifactions* of terebratula and other shells; of a model in sugar of Mont Terrible, or some equally extraordinary Jura mountain; and last, not least, of a large number of small ammonites and terebratulae, put up in paper, with crackers; and showing a fine example of the connexion of the physical sciences in thus enlarging the mind of the maker of bon-bons, while the philosopher sees with astonishment that a fossil is found where he had been accustomed to look for barley-sugar only. After dinner and two or three toasts, of course, most part of the company—the dinner having lasted three hours—were not sorry to join the ladies above, where dancing had already commenced. The ladies were—as ladies always must be—charming, and as there was a pretty sprinkling of Germans and one Pole there was no lack of variety; but, however I may be accused of unpoliteness, I must neglect them, that a line or two may be

devoted to the dresses of the gentlemen. Among our number there were a very few who had come provided for such emergencies ; and one especially, a handsome young exquisite from Paris, was attired in the very pink of fashion, with hair covering about four-fifths of his face, and gold and jewels about as large a proportion of his waistcoat. Contrasted with these was the dress of the rest of us, which may be thus described :—Coat any thing but dress, with or without holes, as might happen : mine was so time-honoured ; waistcoat nothing extraordinary ; trousers all colours but black ; and, lastly, the feet covered, some with boots, some with high walking shoes and worsted stockings. This being our condition with regard to appearance, the dances of all kinds, waltzes, gallopades, and contre-dances, were kept up with great spirit till late. No supper was provided, but there were tea and coffee for those who chose to pay. A very short time was allowed for rest after these exertions ; and at half-past three the next morning we were again disturbed, that we might be ready to depart at four on a much longer expedition, and one which seemed to be the chief object of the meeting. Accordingly, before it was light there was to be seen, in the “salle, or manger,” of the principal hotel, the great assembly of savans, most deeply engaged in the discussion of coffee ; and outside the house might be found an equally extraordinary train of carriages, each with one or more animals attached : but to what species either carriage or animal was to be referred would certainly much puzzle an English naturalist to determine. Before very long, however, and after some clamouring to obtain, I really believe, the last vehicle of any kind in the place, we were all packed some how or other, and proceeded on our way. The carriages, as I have said, were extraordinary : some resembled flies, others looked more like carts ; and there was one of a kind which every one who has been in Switzerland must remember, with the seat sideways, and so ingeniously contrived that, under favourable circumstances, the whole beauty of a district may be passed by without giving the inhabitant the trouble even of admiring it. When we were all deposited, on we went at a most moderate rate, till after an hour or two we stopped, and got out to walk up a hill where the coralline oolite was exceedingly well exposed on the surface of some very highly inclined beds. There was here, also, to be noticed one of those curious proofs of the slow deposition of beds of limestone, which, however common, seem to me always interesting. One of the most plentiful fossils in this bed is a species of *spatangus*, of which numerous specimens, some extremely large, might be observed along the

exposed surface of the bed, but always in the same position as they had lived and died, and presenting only either the lower or the impression of the upper portion to observation. In no instance, out of very many that I saw, was any portion of the convex part of the shell visible. It is clear to the most superficial observer that the bed has been formed gradually round the shell, while the latter was resting quietly at the bottom of the ocean. When we had passed this spot, a turn of the road presented a most interesting prospect. Just before us, looking N.E. a conical hill rose finely and boldly from a quantity of other hills, which formed round it a most beautiful amphitheatre; and while all parts of this amphitheatre were richly wooded with forest trees there was seen, in contrast to them, a perpendicular escarpment caused by some disturbance, and exposing a synclinal axis in the conical hill, leaving bare a succession of terraces of coralline and Portland oolite, which met at an obtuse angle in the natural section of the beds.

Between this point and the town of Délémont the road is pretty, but not remarkable; but beyond that town we went for a short distance down the valley of the Byrse, which all who have travelled between Berne and Bâle must remember as amongst the most beautiful of all the Swiss valleys. The river, indeed, passes through deep cuts in the mountains, which border it, not only beyond Délémont, but also more to the south, between Montier and Courrendlin. Of this part I shall have to speak more presently; but, after passing the latter town, it crosses a wide tertiary valley for some miles to Délémont, and then almost immediately becomes shut in, and romantic rocks rise suddenly on each side to a considerable height. On these stood formerly strong castles; that on the west built by the Romans to overawe another on the east, which the early inhabitants of the country had erected for their defence, but of which all traces are now lost. One tower of the Roman work still remains, and a chapel stands before it, also extremely ancient, and perched on the very pinnacle of the rock; so that, when seen from below, one can hardly fancy that there is sufficient room even for the foundations of the building. This chapel, so romantically placed, is as curious for its interior as for its situation and appearance. There are in it two or three extremely ancient paintings, in a style resembling that of the early Flemish school; and one of these is said to be as much as eight centuries old. These are in the chancel, and the other walls of the church are all but covered with more than a hundred of the most extraordinary and even ludicrous pictures, left there "ex voto"—that is, in consequence of vows made by sick people, and for friends

in distress. It is utterly impossible to conceive anything more truly absurd: the perspective is worthy of a Chinese artist, but the faces and dresses are essentially European; and the funny looking children in squabby Dutch petticoats, contrasted with papas in bright blue coats, with gilt buttons and very short square coat-tails, and mammas in all the magnificence of wide frills and gay colours, is inexpressibly droll; what, however, all these had to do with religion it is difficult to say, at least to us sober protestants. The view from a cross just outside the chapel is very extensive and interesting, as it commands, not only the whole length of the gorge through which the river runs, but also the longitudinal valley which it is just leaving. There are not wanting in the distance, ancient ruined castles and village spires, to add the interest which man could contribute. I should not forget to mention that we were received by a deputation from Délémont, and requested to partake of a very handsome déjeuner à la fourchette, to which, I believe, we all did ample justice. After leaving the chapel we descended to a place where the pisolitic iron of the oolite formation is so plentiful that it is worked in considerable quantities, and then proceeded on our journey, crossing the tertiary valley already alluded to, and soon entering the gorge extending from Montier to Courrendlin. I am not aware of anything in Switzerland so truly extraordinary as this; and although I have seen much that is grand, bold, and picturesque, especially in the Oberland Alps, yet, looking with the eye of a geologist as well as a traveller, I must still say that this is the most extraordinary. To describe it I feel to be a vain attempt, for a great part of the wonder consists in the incessant shifting and changing of the scenery, and the extreme difference which every step we take seems to produce. Both the entrance to and exit from the gorge are quite sudden. In coming to it from Délémont we quit the open country, and in one moment find ourselves among bare, rugged rocks, rising perpendicularly on either side, presenting the most grotesque appearances, and giving natural sections of beds so utterly in disorder, and apparently inclined so variably, and without any plan, that the mind is lost and bewildered in attempting to follow the disarrangement, and trace anything like order in such confusion. Anticlinal and synclinal axes here follow so rapidly that all idea of counting their number is out of the question. At length, however, they cease, and there is the mark of a most violent disruption; the beds are first perpendicular, and then, within a hundred yards, they are seen to bend rapidly, until, at the top of the high exposed cliff, they are perfectly horizontal. So sudden a bend of rocks, which are now hard and

very brittle stone, I have never seen. After this the valley widens for a short distance, and is then almost closed in by two walls of rock, projecting to meet each other on the opposite side of the river. These walls are, perhaps, eighteen or twenty feet thick, and three or four hundred high, and they project not less than twenty yards from the general line of the rock on each side. Not far off there is a considerable spring of petrifying water, whose source is hidden among the luxurious vegetation and the water drops from the leaves and the extremities of the branches in a constant stream, encrusting with stone every substance upon which it falls. So large a quantity of calcareous matter is thus deposited, that the petrifications are actually dug out and carried to a distance, to be used as a building stone after time has hardened the composition. Soon after leaving these weeping trees, and on coming out of the gorge towards Montier, the tertiary sandstone called molasse is seen on the roadside, and continues southward. Our course, however, lay rather to the east, and we reached the Weissenstein the same evening, just in time to be witness of a most magnificent storm, but too late to enjoy the very extensive prospect which, in fine weather, makes this place so much resorted to by all travellers in Switzerland.

The next morning we left our elevated quarters on this mountain rather early, though without seeing more than some very pretty clouds far below us. Going first to an adjacent mountain, rather higher, we almost directly descended upon a remarkably interesting secondary valley, in which might be observed the whole series of the Jura oolites, down to the muschelkalk. I may remark here, especially to those who have not visited Switzerland with geological eyes, that no where can the effects of the various causes in operation be so well observed—no where are they exposed in so unaltered a way to observation—as in the valleys of the Jura, the eastern ones more particularly. All seems as fresh as if the disturbances had taken place yesterday, and one can see the jagged and naked rock at the head of a valley, melting quietly down into a regular hill-side, and terminating in merely undulating ground at the opening of the valley, with all the simplicity and clearness of a work of yesterday. It need not be pointed out how much the interest of geology is increased in such a district, and how many difficulties, or things which seem to be difficulties, are here cleared up before the light of nature and truth.

Working our way now towards Solothurn, or Soleure, we come into the valley of the Aar, and the geology met with is entirely secondary. The city of Soleure stands upon the Aar; and although

pretty and curious, and containing much to interest and amuse, we have not time to dwell long upon its beauties and wonders. I will mention only the museum, in which there is collected a remarkably fine series of fossils, of the Tortoise and Turtle kind, obtained from various parts of the Juraoolite. These consist, not only of shells, but also of bones and teeth, and are in great abundance, and extraordinarily perfect. Besides these, there are many first bones from the same formation, and a few teeth labelled *Anoplotherium* and *Palæotherium*, but which, in all probability, must be referred to some saurian, and not to animals which, as far as we know, belong exclusively to tertiary beds.

When we had seen all the wonders of the town—and I should not omit to say that the prefect and other authorities waited upon and showed us every thing—we partook of a magnificent cold collation, to which nearly a hundred people sat down, and then proceeded on our way, and towards ten o'clock arrived in the neighbourhood of Bienne, which was our next point of attraction. At about a mile from the town we found a deputation waiting our arrival, and having descended from our carriages, we listened, with our heads uncovered and our faces composed into the most decent gravity, while a short, puffy, important little man, with a proportionate voice, was haranguing us on the honour done to Bienne by our visit, and the delight which its inhabitants felt, in common with all the Swiss, at the opportunity of showing their feelings of veneration for the French savans, especially those who studied that science—of all others the most interesting—to which the society present had devoted itself. Having had a happy delivery of his speech, and thereby lightened his mind greatly, the little man listened with vast gravity, while our pro-vice-president made a fine flaming oration in the same style; and then, after much bowing, we put on our hats, got into our carriages, and made the best of our way onward: but our honours were not yet full blown. Before we had got much more than half a mile, or were at all within sight of the town, we heard salutes firing: our modesty at first refused to believe that it was intended so to exalt us; but as we approached the firing continued, and we soon saw that we were to enter in triumph. The whole military and civil force was, in fact, drawn out to meet us, and we were ushered into the town amid such a beating of drums, playing of music, waving of flags, and shouting of voices, that strangers would have thought that at least half a dozen kings were making their entry, not crediting that the view of our geological faces and hammers could be the sole attraction. How-

ever, lest I should be accused of egotism, I will not enlarge on this subject. We dismounted at the principal inn, and were received by all the chief people of the place, who informed us that they expected the honour of our company to dinner. Such an offer could not be refused, and we agreed so far to change our plans as to sleep at Bienne, and proceed next morning on the lake, to Neuveville, where we had made arrangements to take up our quarters, and where, it turned out afterwards, we had been anxiously expected, and the town was to have been illuminated for our amusement.

However, we stopped, as I said, at Bienne, and thence made a short excursion round the town, to look at some uncommonly large boulders of granite, gneiss, and porphyry, which are very numerous on the mountains behind the town, and were interesting when taken in connection with certain flat, polished spots, on the face of the Jura oolite, upon which they were lying. As, however, I must say more on this subject before concluding my account, I will pass it by at present. From Bienne, next morning, we went by the lake to Neuveville, at least some took water, but many preferred walking, as the weather was extremely unfavourable, and there was every appearance of a thoroughly wet day. Notwithstanding the rain, however, all agreed that we ought not to omit visiting the little island St. Pierre—so celebrated as the abode of Jean Jacques Rousseau—and we were put ashore there, but, alas! to very little purpose, as we could neither enjoy the beauties of the island, or see any of the prospects which make it so charming a residence. For want, I suppose, of out-of-door's work, the society held a meeting in the bed-room of the Frenchman's idol, some of the members sitting on three chairs, with which the room was furnished, some on the table, others on the floor, and the rest, of whom I was one, on the very bed on which he had slept. Not being of a very imaginative disposition, I must confess that I was not inspired, and could not discover any very striking proofs of inspiration in the two or three exceedingly dull papers which were read by the members of the society, and completed the business of the meeting. After our "seance" we took boat, and soon found ourselves approaching Neuveville, the information being given by the salutes which were fired, rather than by any view which the heavy and incessant rain permitted us to have of the place.

We could not, of course, do much under such circumstances, but resolved not to be beaten. We went to see a fine example of polished rock in the vicinity, and then returned, dined, and made our way back to Bienne in the evening, as wet, cold, and miserable, as

could well be. Next morning, at half-past eight, I found myself breakfasting quietly at Berne, my geological trip and the meeting of the society, alike concluded.

But now it will be asked, was this all? and was there nothing done in the day or two which elapsed before I met the society? In answer, I have only to say, that, after the most diligent enquiries, it appeared to me that nothing whatever had been done on the Wednesday, but that on Thursday morning—it was on that afternoon that I arrived at Porrentruy—there had been a communication made by Prof. Agassiz, on certain appearances which had been observed in the neighbourhood of glaciers, during a trip in the high Alps.

The observations of this eminent naturalist were original and interesting, but whether altogether well founded I must leave it to others to decide. He had been examining the edges of glaciers, and had come to the conclusion that these accumulations of ice were increasing annually at a very rapid rate. So far he is, doubtless, right: but then he had also examined the surfaces of rock upon which they moved; and from his observations he gave, as a theory, that the instances of rock polished naturally on the Jura limestone mountains, were owing to the sliding of glaciers upon them in former times, when, in all probability, the whole of the great tertiary valley of Switzerland was covered with water. His proof of this seemed to rest on the fact that these extensive flat surfaces of rock are marked with large and small furrows and scratches, all horizontal, and presenting the same phenomena which really occur when a large mass of mixed ice and stones is dragged forcibly along an inclined surface.

In the starting of this theory, and the discussion consequent upon it, seemed to me to consist the whole business of the meeting; and there certainly was much talk concerning it both at Bienne and Neuchâtel, where the best instances of the polished rock are found. But I feel bound to add that, beyond this, no subject of the slightest general interest was publicly discussed, nor was any agreement of opinion produced by all the talk on the one matter in dispute. What the society may, on other occasions, do, or have done, I am unable to say: I only speak in the present tense, and my judgment is given without the slightest intention of finding fault; for I cannot but think that the great use of all such assemblies is rather the bringing together fellow-workers in the same field, and so promoting good feeling and enlarged views, than, by the communication of new discoveries, to advance immediately the cause of

science. I will only add that I parted from the numerous acquaintances I then formed with feelings of mixed pleasure and regret :—pleasurable reminiscences of a most agreeable week, and regret that a long time might elapse before I again met so united and friendly a party.

D. T. A.

IL BANCOLO.

By AMÉDÉE DE BAST.

On the 15th of March, in the year 1735, the greater part of the inhabitants of Marseilles assembled on the Quay to witness a solemn and affecting ceremony. The monks of the order of the Mathurins* had conveyed from Algiers, Tunis, and Morocco, a number of Christian slaves, whom they had ransomed. The vessel bearing the poor captives and the monks who had redeemed them had entered the port on the preceding evening, and its arrival becoming known throughout the city, infused a vivid emotion of joy into the bosoms of a multitude of families, who hoped to find relations and friends among the captives whose chains a magnanimous charity had broken.

A procession, consisting of the clergy of the different parishes, preceded by the various societies of the citizens bearing their banners, the magistrates, the superintendent of the province, and the governor and his staff, proceeded to the port which had been occupied since break of day by an immense concourse of spectators. The vessels in the harbour raised their national flags as a sign of rejoicing ; the cannon were fired at short intervals from all the forts of the city, and mingled their thunder with the sound of the bells of the different churches.

* The Mathurins, also called Fathers of Mercy (*Pères de la Miséricorde*), devoted themselves exclusively to the ransoming of slaves. They travelled in every country faithful to the Holy See, collected alms, and each year negotiated with African princes for the ransom of many hundreds of captives. Monks of the order would frequently remain as hostages, either for the purpose of redeeming a greater number of slaves, or as security for the payment of debts which they could not immediately discharge.

The ransomed captives, many of whom bore marks of the cruelty of their masters, now landed on the quay. As they stepped on shore some prostrated themselves upon the earth, and kissed the soil of that France which they had despaired of again beholding. Others called with accents of joy to friends whom they recognized among the crowd. Tears of tenderness glistened from every eye; while, in the midst of this scene of universal happiness, the venerable monks, the authors of this sublime felicity, walked calm and silent through the crowd that overwhelmed them with benedictions.

The procession went to hear a solemn service of thanksgiving at the cathedral, after which each captive was restored to his family or his friends. Those who had neither relations nor acquaintances in the city were received by the inhabitants, who furnished them, after a few days of repose, with the means of returning to their homes.

A great number of strangers had been present at the touching spectacle: each had paid his tribute of admiration to the fearless intrepidity and superhuman devotion of the Fathers of Mercy. When the ceremony was ended, one of these strangers, who, by his accent and dress, might be known for a Venetian, approached one of the monks, and thus addressed him:—"If I am not deceived, the number of captives whom you have ransomed amounts to more than two hundred." "It is so," answered the monk. "How many still remain in slavery in Africa?" continued the stranger. "Alas! Sir, more than six hundred," replied the holy man. "Our receipts during the last year have not been considerable. On this occasion we have been able to ransom only a few aged Christian captives; and we were constrained to leave as hostages three of our brethren, in order to redeem three unhappy Italian slaves, whose age and infirmities seemed about to consign them to the tomb." "Three Italian slaves?" interrupted the stranger, with a vivid expression of interest; "and to what part of Italy do they belong?" "They are natives, I believe, of Sicily," said the monk. "Their names?" demanded the stranger. "I shall be able to satisfy your inquiry," said the monk; "for I have a list of all our unhappy brethren."

He then drew forth a scroll of parchment, and cast his eyes over it. "Here are the names which you wish to know:—First, Paolo Bancolo, aged eighty-six, officer of the customs at Palermo, captured, in the year 1700, at the Isle of Syea." "Heavens!" exclaimed the stranger, "are you not deceived in that name?" "Read for yourself, Sir," said the monk. "I see! I see!" exclaimed the stranger; "it is indeed Paolo Bancolo! But now tell

me, oh, my father ! where is the venerable old man ? tell me where I may find him." " Paolo Bancolo," said the monk, astonished at the change in the countenance of his companion, " is at this moment in the house of Signor de Langeron, governor of Marseilles. The courageous and generous Langeron is not satisfied to manifest his devotedness when his country is distracted by war or ravaged by pestilence, but he is also the great hospitallier of Marseilles, even in the time of prosperity and peace. Yes ! I repeat, Sir, Bancolo has indeed found an asylum in the house of Langeron ; and he will not leave it but to set sail for his native land." " I thank you, my reverend father, a thousand times," exclaimed the stranger, as he kissed with ardour the hands of the monk ; " but I wish to meet you again : where can I find you ?" " At my convent," said the monk, " which is distant but a few paces from this spot." The stranger bade adieu, and departed.

He immediately ran with all his speed to the street leading to the residence of the governor ; and it was not until the moment of his departure that the monk observed that he was followed at a respectful distance by two lackeys dressed in rich liveries.

The night was dark : the bell of the abbey of the Mathurins had already summoned the inmates of the convent to vespers, when the porter announced to the superintendent father that two strangers awaited him in the *parloir*. He attended upon his visitors, and with the first glance recognized in one of them the stranger who had conversed with him in the morning, and in the other the aged captive, Paolo Bancolo. But the appearance of the latter had changed : the tatters of the slave were replaced by the sumptuous vestments of the wealthy man. He tenderly embraced the Father of Mercy, and once more gave utterance to expressions of the deepest gratitude. " Paolo Bancolo," said the superintendent father, " if we may judge from appearances, God has in reserve for you a destiny at once great and happy. Be grateful, Bancolo, for thy lot ; and in the brilliant sphere in which thou art about to move never forget those unhappy beings who still languish in servitude, and whose remembrances of the land of their nativity and its liberty can never be attended but by sighs and tears. " Ah, no !" answered the stranger, " Paolo Bancolo can never forget his companions in misfortune, but, on the contrary, will use every means in his power to soothe their sufferings and to break their chains. And I solemnly engage myself, in your presence, to do this. I am his son ! and it is I who am his pledge." " And do I indeed behold in you the son of this old man ?" said the monk, with an intense expression

of astonishment. "Yes, reverend Sir," said the stranger; my father was torn from the bosom of his family whilst I was yet an infant in the cradle; and it is to-day for the first time that Heaven has granted me the inexpressible satisfaction of beholding my parent. Eight days after my birth, my father, who, as you already know, was an officer of the customs at Palermo, was invited to go to the isle of Syea by some Greek merchants to whom he had rendered important services. He embarked at the port of Catania, and was never heard of more. My mother despatched to Syea messengers in whom she could repose confidence. The Greek merchants affirmed that they had not seen my father, and that the vessel in which he had embarked had never arrived at Syea. It was generally believed that he had perished: and you may judge of my mingled feelings of astonishment and delight when I this morning heard from your lips the name of Paolo Bancolo. The name, the age, the date of his capture, all led me to believe that I was not deceived by the language of my heart. I hastened to the house of the Count de Larengon: my eyes fell upon the captive, and in an instant I clasped my father to my heart!" "How inscrutable are the decrees of Providence!" exclaimed the monk. "But had you, Paolo, no means to inform your family that you still drew the breath of Heaven?" "We were captured," answered the aged man, "when we were scarcely a few leagues at sea; and on our arrival at Tunis we were sold to the Dey, and were sent to assist at the works which were then in progress at a fortified town sixty miles inland; and it was not until my age and infirmities rendered me unfit for further services that I was sent back to Tunis, where I was happy enough to meet you, my reverend father, when you restored me to freedom by leaving two monks of your order as hostages in my stead." The son of Paolo Bancolo here interrupted the narration of his father. "How much," said he, "do you think would be requisite for the ransom of the six hundred prisoners who still remain in servitude at Tunis?" "The Mahommedans," replied the monk, "are relentless traffickers in humanity: they are not only rapacious, but almost insatiable. I still think, however, that with the assistance of five hundred thousand livres, we might at length succeed in redeeming all our brethren from captivity." "Then, my reverend father," answered the stranger, "it depends only upon your pleasure to receive this sum. You have been long inured to travel." "Three-fourths of my life," said the monk, "have been passed in foreign lands. I have made long voyages at sea; I have crossed the deserts of Africa, sustained by my confidence in God, and urged for-

ward by my love of mankind. Judge, Sir, therefore, if I can shrink at a single voyage, the object of which is the deliverance of all our unhappy brethren." "Meet me, then, next year," said the son of the captive, "on the evening of the day preceding Ash-Wednesday, at the palace of Orsini, in the Square of St. Mark, at Venice; you will find me there. Remember, my reverend father, that the fate of our brethren in Africa depends on your punctuality."

After having again tenderly embraced the excellent Father of Mercy, the elder and the younger Bancolo bade adieu to him, and departed. A splendid equipage awaited them at the door of the convent, and bore them rapidly towards Italy.

On the evening of Shrove Tuesday the following year, the Theatre of Fenici, at Venice, presented an appearance the most splendid that imagination can conceive. The eight ranks of boxes were filled by spectators, who comprised all that was most distinguished in Italy for youth, for beauty, opulence, and rank. The dazzling lustre diffused by twenty-five thousand lamps of silver, heightened by the reflection of diamonds, rubies, pearls, amethysts, and bracelets of virgin gold, produced an effect so striking that it seemed that all Italy, as with one consent, had met that night at the Theatre of Fenici, with the design of uniting in one spot the highest effect of every art. The Roman ladies might be known by the distinctness of their features, and the Bolognians by the loveliness of the exquisite smile which perpetually played upon the countenance and irradiated the expression; the Milan lady might be recognized by the slender beauty of her waist; the Neapolitan, by the ardent fervour beaming from her eye; the Mantuan, by the transparent whiteness of her skin; the Florentine, by the glossy blackness of her hair; and the Venetian, by the graceful bend of her recumbent figure. Amongst the spectators might be seen scions of many of the most illustrious families of both ancient and modern Italy: the descendants of Gracchus, Scipio, Sforce, and Medici, the successors of Michael Angelo, of Titian, of Caravages and Bernin, were on that evening united in the Theatre of Fenici. All that was most illustrious in science, the arts, in rank, in office, in political power and intellectual greatness, was here assembled by Pleasure, that gentle and beneficent goddess, whose power is recognized throughout the world, and who on that evening, from her throne of sapphires, where she was supported by her attendants, Fashion and Good Taste, diffused her gracious influences over this enchanted paradise.

The picturesque and poetic costumes which, at an early period of

her history, prevailed in Italy, had, towards the middle of the eighteenth century, entirely disappeared ; yet, notwithstanding the French fashions which were then in vogue, the natives of each province still retained some relics of the ancient costume. It was thus that the Venetian ladies still wore the ancient Moorish plume, and the breast-plate studded with stars of gold and silver. The gentlemen were, in general, dressed after the French fashion ; and the ancient Milan dagger, and the old Roman poignard, which, in the last generation, lent so much elegance to the figure of our fathers, were replaced by the modern sword with the steel handle. The cane, which is now universally worn, both on foot and horseback, by all aspirants to fashion, though it may be a great improvement, is certainly far less graceful than a sword.

The ladies were also provided with weapons. They bore immense nosegays formed of the flowers of the rose, the pomegranate, the tuberosa, the jonquil, and the lily ; and before the commencement of the play amused themselves with stripping off the leaves and strewing them on the young patricians assembled below, which, falling on their heads and shoulders, seemed to convert the pit into an extended plain of undulating verdure.

But the ordinary festivities of the Carnival would not have formed an attraction sufficiently powerful to collect this magnificent assembly. A much stronger motive was united to the desire of joining in the annual festivity. Rumours had been circulated in every part of Italy that the great Polichinelle was about to retire from the stage. It had been announced that on this evening he was to appear for the last time, and that this would be the last opportunity of witnessing the splendour of his talents in the full lustre of their glory. All Italy had, accordingly, risen as one man to pay in crowns, dithyrambics, and testimonies of every description, the tribute of admiration and gratitude to that man who had been, during so long a period, the presiding genius of their amusements.

Polichinelle stood alone ; he united in himself all the vices and virtues common to humanity. Vain, presuming, avaricious, quarrelsome and cowardly, incredulous and superstitious, he was, at particular seasons, and under the influence of peculiar impressions, generous and compassionate, and, according to circumstances, a philosopher or a spendthrift. But, whether under the influence of his good or evil propensities, a charming simplicity, which is one of the most prominent features of his character, is always predominant. His reasoning, though sometime approaching to coarseness, is just and power-

ful; his manner is marked by a comic vein; and his conversation is not less original than his figure. The person of Polichinelle may, indeed, be said to be almost hieroglyphic. His countenance bears testimony of the greatness of human nature; but it is, at the same time, deeply furrowed by its sufferings. His nose is aquiline, which is an indication of courage; but it also betrays his intemperance. His forehead is high and expansive, resembling that of the deity of Olympus; but the conflicts of those passions to which he is naturally subject have, in the course of years, distorted and contracted the surface of the noble seat of intellect. His eyes are large, but their lids restless, like those of an eagle which has too frequently looked on the sun. His mouth is beautiful, his teeth are ivory; but his smile, which is to the mouth that which expression is to the eyes, has something diabolical, and a peculiar sneer difficult to be described. The hair of Polichinelle is grey, and his figure distorted; but these defects, which are only the infirmities inseparable from age, are lost in the extreme gaiety of his spirit and poignancy of his wit. The general effect of the character of Polichinelle is a striking instance to how great an extent that vivid, natural, and homely humour, and easy gaiety of manner, will compensate for plainness of feature and deformity of person.

Bancolo had, in common with most men of superior talent, a presentiment of the character in which nature designed him to excel, and well knew how to draw the greatest possible advantages from all the peculiarities of his versatile genius. To the study of this character he had diligently applied himself; and such was his success, so intimately did he appreciate his part, that the player vanished, and the audience saw and applauded, not Bancolo, but Polichinelle. His industry and talents did not fail of their reward. He was universally acknowledged, even by his rivals of Naples, Palermo, Bologna, Pisa, and Florence, to be the greatest actor in the character of Polichinelle. His success extended his reputation: he crossed the Alps and the Apennines. Polichinelle became an object of interest to the inhabitants of Madrid, Vienna, Paris, and Berlin. Every part of Europe was visited by Bancolo, and every where did he reap golden harvests, and at each place extended his fame. He returned, however, (like a submissive and grateful child), into the bosom of his native land, there to display to the city of his nativity the last efforts of his talent, and to offer up upon the altar of his country the last incense of that genius which he designed to withdraw for ever from the world. Bancolo! we shall see him no more: it is the last time of

his appearance! This evening he will bid us adieu for ever. The loss sustained by France and Italy is greater than words have power to express. The retreat of Polichinelle is a national calamity; for, as a land of heroes and artists, Italy is no more!

Accents of grief are heard on all sides: still, females might be seen to smile under the slender covering of their veils. Streams of melody flowed from an orchestra worthy to accompany a choir of angels, or to regulate the revolutions of the spheres. Ices and the most delicious drinks were served up by Ethiopian attendants; flowers were strewed on every side, and falling on the shoulders of the young military officers, added to the lustre of their golden epaulettes and brilliant uniforms.

Bancolo surpassed even himself, now exciting his audience to a roar of merriment, and now melting them to tears. The theatre resounded with the applause of twenty thousand voices, and cries of "Bravo, bravo, bravissimo per Bacho!" were echoed from side to side. In another moment every face was suffused with tears; a deep silence then pervaded the assembly, broken only by sobs.

The females, whose forms were covered with thin veils, viewed from above, resembled those embalmed beauties, the daughters of kings, who sleep in silence in the deep caverns of the pyramids of Giseh.

The adventures of Bancolo himself formed the subject of the drama. He was represented as an orphan, a beggar, a nobleman, a spendthrift, a sailor, a soldier, a priest, and a merchant; and the meeting with his father, the poor captive of Tunis, closed the play, the character of which was so diversified as sometimes to excite the boisterous mirth of children, at others to draw tears from the eyes of men. Sometimes, too, the effect suddenly changed from the most noisy merriment to the deepest distress. The great magician was Bancolo. He seemed to possess the heart of his audience, so as to be able to draw forth at pleasure laughter or tears. As the curtain fell, the assembly rose in a mass, and with a voice resembling thunder exclaimed, "Bancolo! Bancolo! the illustrious Polichinelle! let him come forward." Bancolo was arrayed in the uniform of a warrior in his triumphal costume, and as Polichinelle.

The plaudits instantly burst forth with renewed fury; and cries of "Long live Bancolo!" resounded from all parts of the house. Such demonstrations of rapture might almost have led to the supposition that Venice had recovered her ancient dominion over the ocean, and that the nuptials of her doge with the Adriatic Sea were about to be

celebrated. "Long live Bancolo!" echoed a thousand voices. The welcome given to Polichinelle resembled that accorded to Othello, when he appeared for the first time in the Great Canal, surrounded by his soldiers bearing banners reeking with Turkish blood. But Bancolo removed his mask, and the intoxicated audience beheld the natural figure of a man whom they had never before seen but under a borrowed form. The change only increased the vehemence of the acclamations; the immense edifice of the Theatre of Fenici seemed about to be buried under the irruption of applause, which burst as from a volcano.

No sooner had Bancolo signified his desire to be heard than the noise ceased; and every ear became erect, as if in expectation of renewed delight. The whole assembly instantly sunk into the deepest silence. Bancolo advanced towards the three hundred lamps which illumined the stage, and with a tremulous voice spoke as follows:—

"GENTLEMEN,

"You see before you a man deeply impressed with gratitude for your kindness towards him, of which you have to-night given a crowning instance. I render thanks to that Being whose name reverence forbids us to pronounce, that I have enjoyed, during a quarter of a century, the happiness of being able to please you. Yes, I thank that power to which every country is indebted for those men who have distinguished themselves in arts, in arms, or in virtue. Those individuals in whose noble natures may be distinctly traced the hand of the divine artist, are alone worthy of that applause which you have been pleased to lavish upon me. You have hailed and accepted me. Receive, Gentlemen, my most cordial thanks, or rather retain for ever the remembrance of that gratitude which at the present moment glows in my heart. I shall have, in my retreat, the consolation of reflecting that I have never, in the exercise of my profession, wilfully deviated from the path of rectitude; and that I have used my utmost efforts to soothe and alleviate the sufferings of my country. Gentlemen, Farewell!"

Renewed acclamations resounded through the assembly. But now other testimonials were added to the former manifestations of sympathy. The ladies threw flowers on the stage; sonnets in French, English, and Italian, mingled with crowns and garlands, were showered at the feet of Bancolo. Princes and peers tore from their sides

their badges and decorations, and cast them at the feet of him who had so well understood the paramount duties of a comedian.

The figure of Bancolo was observed to bend forward : he wept ! He raised his hand, and silence was instantly restored. "Gentlemen," said Bancolo, "this is the last day of the Carnival at Venice. In one hour this magnificent theatre will be transformed into a ball-room, and you will return to it under different costumes. The nobleman will be lost under the vestments of the peasant, the baron will appear as a page, the page as a man whose hair is silvered with age, and the virgin as a dowager : every age, every rank, will be inverted until the first rays of Aurora announce the return of day. Great will be the delight which you will derive from the amusements in which you are about to participate. But, Gentlemen, allow me to ask you if you would not feel an emotion of gratitude towards that man who, though only a poor stage-player, would suggest to you the means of sanctifying, by a holy and beneficent action, the diversions to which you are about to resign yourselves ? At the moment, Gentlemen, when to the accents of enchanting music you dance in the midst of delicious perfumes, brethren and christians languish in chains, or struggle in the agonies of death. Gentlemen, I implore you, in the name of Heaven, to succour those unfortunate beings who groan beneath the iron hand of the infidel, and who at this moment, perhaps, extend their hands to you as their only resource. Let us place beneath the gracious protection of a pious act our several satisfactions : you the pleasures which you will this evening enjoy, I my repose in the bosom of my household gods. A holy monk of the order of the Redemption awaits your offerings in the Square of St. Mark. Thither I go ; follow me, Gentlemen, and you, noble Ladies : it is, perhaps, the first time that an act of christian charity has been advocated by the voice of Polichinelle."

The audience rose. Polichinelle slowly descended the steps of the theatre, followed by the whole of the brilliant assembly which had been collected within its walls. They were received by the acclamations of the crowd. The cavalcade proceeded in this order, escorted by gondolas, which attended it as pages until it arrived at the Square of St. Mark. In the centre of this Square, on a pedestal of bronze, stood the ancient lion of Venice, the genius of the city, who was doubtless conscious of the scene which was passing—a scene which recalled those mellow days when Venice was conquered from the dominions of Neptune, and proudly raised, for the first time, its stately head above the waters.

The venerable Father of Mercy was found seated on a chair of ivory on the threshold of the palace of Orsini: on his right was the apostolic prothonotary, on his left a secretary of the republic. The hall of the palace was hung with the richest tapestry, and illuminated with lamps of silver. Polichinelle, followed by the brilliant cortège, slowly advanced under the silent arcades of the palace. Scarcely had he entered when the Polichinelle suddenly vanished, and Bancolo appeared in the costume of a noble Venetian.

He entered, and placing a purse of gold at the feet of the monk, said, "My reverend father, I fulfil my promise, and restore to you the ransom of my parent. Implore Heaven to accept that ransom which has been offered for me. "My son," answered the venerable Mathurian, "in the multitude of the offerings which I have received to-day, that of Polichinelle is not the least worthy, or the least acceptable in the sight of Heaven."

THE STAKE:

A Poem.

IN THREE PARTS.

"It is a woe 'too deep for tears' when all
Is reft at once, when some surpassing spirit,
Whose light adorned the world around it, leaves
Those who remain behind nor sob nor tears,
(The passionate tumult of a clinging hope),
But pale despair and cold tranquillity,
Nature's vast frame, the web of human things,
Birth and the grave, that are not as they were."

SHELLEY.

LADY! if over my unschooled page
Thy grave eye wander with regard severe,
Questioning whether aught of truth lie here,
Worthy thy thoughts an hour to engage,—
Bethink thee, O! most gentle Doctoresse,

Of one who oft hath listened at thy feet
 In the deep woodlands, or the green recess
 Of far-off meadows, whose still quietness
 Was broken only by the bee's low humming
 Among the hay, or the faint chimes far-coming
 From the unseen hamlet ; to whom thou hast made
 The names revered of priest and bard more dear
 By dim remembrance of those moments sweet,
 Fleeting in idlesse under verdurous shade.

 PART I.

" For who, to dull forgetfulness a prey
 This pleasing anxious being e'er resign'd,
 Left the warm precincts of the cheerful day,
 Nor cast one longing, lingering look behind ?"
Elegy in a Country Churchyard.

O ! TRUTH, thou art a fearful thing,
 A seraph with such dazzling wing
 That whoso looketh on thy rays
 Would fain, though mist and darkness holds thee,
 For ever and for ever gaze
 Upon the dim clouds that enfold thee ;
 Poring through many a volume weary,
 Toiling through page of schoolmen dreary,
 In faint hope that their mazy line
 Some thread of thee might yet entwine :
 But, oh ! (like those dread angels standing
 At Eden's portal—closed for ever !
 Never their radiant guard disbanding,
 Lest mortal footstep should endeavour
 To tread once more the odorous gloom
 Where bears the Tree of Life its bloom),
 If beautiful the form thou wearest,
 A weapon, too, of flame thou bearest ;
 And daring need the student be
 Beneath its blaze who seeketh thee.

Through the winding tower stair,
 Through the stifling dungeon air,

Through the narrow turret cell,
 Within sound, above, around,
 Echoed by the hollow ground
 Of the awful tolling bell
 That doth peal the frequent knell ;
 Through the death-fire he must grasp thee,
 Who, with heart and nerve unshrinking,
 From the cup thou pourest drinking,
 Undismayed would own and clasp thee.

In the quiet greenwood wandering,
 Over deep thoughts simply pondering,
 Unawares my foot hath found thee,
 With all pleasant things around thee ;
 But thyself, oh ! far more sweet
 Than ought blossoming at thy feet.
 From dark dreamings thou hast freed me,
 And I follow'd thy far speeding
 Full of thee, and little heeding
 Whither thou at last would'st lead me.
 And lo ! here, in dark walls chainèd,
 From all I so love restrainèd ;
 From the happy summer glades,
 From the flower-lighted shades ;
 Shut out from the open sky,
 Fettered and condemned I lie ;
 And if I persist to cherish
 Thy pure words, by men denied,
 And in love of thee abide,
 For thy sake and on thy side
 In my green youth I must perish.

'Tis not for my father's child
 At the sight of death to falter ;
 For my country's denizen,
 Mid evil times and evil men,
 From her elder days' pure altar,
 From the doctrines undefiled,
 And the holy laws compiled
 Far in the ancient eastern wild,
 To turn back to the dreamings rude,
 The traditions that delude

The misguided multitude !
 But the world is beautiful,
 All around the land is full
 Of sweet voices, music making,
 In the woodlands, night and day,
 Their deep-breathed quiet breaking
 With carolling and roundelay.
 And a hard thing surely were it,
 For a young and care-free spirit,
 Thus to hear the heavy knell,
 By malignant powers rung,
 Tolling its forlorn farewell,
 And thus hurriedly be flung
 (Like the recreant angels thrown
 From the heights of their lost heaven)
 Far into that dark unknown,
 Where no face of love to meet me,
 No familiar voice to greet me,
 With foretaste of welcome given,
 Mingles with the awful shade
 That upon my heart is laid,
 Like the ominous shadow cast
 From a vault with dim lamps burning,
 Whose gate with light step may be passed,
 But from whence is no returning.

Heavy the night's shadow lies
 On the hush'd abodes of men,
 And the quiet-breathing skies
 Look down peacefully as when
 I have watched their blue vault darkening
 Over my green native dells,
 And, with ear attentive hearkening,
 Have caught the far city's bells,
 Or the warder's evening horn,
 On the freshening night breeze borne.
 With a ripple hardly heard
 The still river passeth by ;
 Hardly is the image stirred
 That deep down its bed doth lie.
 The crescent of late-burning lights
 Seen, on dark and quiet nights,

Imaged in the shadowy stream,
 By the uncurtained lattices,
 Which, where the long bridgeway lies,
 Over its gray arches gleam.
 The high narrow chink that lighteth
 Dimly these dark turret walls,
 My wearily longing eye inviteth
 To look on the far-stretching plain
 My foot must never tread again,
 And my thirsty ear delighteth
 There to catch the distant falls
 Of the melancholy chime
 That marketh the sweet vesper time,
 Beyond the pageant city's sway,
 In lonesome hamlets far away.

Oh ! dispeller of the vapours,
 The thick mists that error raiseth,
 Diming her illusive tapers
 Wheresoe'er thy bright torch blazeth :
 Hast thou, too, no hidden spell,
 Canst thou no sign of power tell,
 To disperse the oppressive gloom
 That doth hover round the tomb ?
 Surely in the awful folds
 That from human view have wound thee
 Must the secret knowledge lie
 To thread its vale of mystery,
 And to human queryings fond
 Light up that which lies beyond.
 Oh ! too late, too little shewn thee,
 Would that I had earlier known thee !
 Would that in the page which holds,
 Under every meaning line,
 Some deep-buried gem of thine,
 I had sooner sought and found thee !
 Come what may, and come what will,
 On and on I follow still ;
 Trusting that who, with true heart bent,
 Thee seeketh with sincere intent,
 Though the path with toils be rife,
 And the struggle be for life,

Yet the issue of the strife
Never, never shall repent !

Like to the pleasant and heart-freshening breath
Of sweetest summer, when one warm still day
Breaks through the chill mists of a wintry spring,
And hedge and orchard with gay blossoming
Their unrobed boughs all hastily array,
Too soon to perish—upon England fell
Thy bright, brief reign of promise, O ! fair son
Of early-fated Seymour ! and though well
The bright age, like the late prevailing sun,
Of thy sweet sister Temperance, upbuilt
All the fair works dismantled and undone
By the lost child of wrongèd Arragon,
Yet could they not restore the pure blood spilt,
The treasures pour'd into the lap of death.

PART II.

" And of this busy human heart weary."—*The Picture.*

NAME of torture ! name of terror !
Weapon in the hand of error !
Lending aid to closer bind
Chains upon the human mind,
Which a moment's space may wear them,
But to atoms then will tear them :
Phantom to the faint and fearful,
Haunting memory to the tearful—
The young hearts whose well-springs lie
Within reach of misery :
Husher of the heart's long ache,
Peace-bestowing, restful Stake !
Would my weary steps had found thee,
And my tired arms might cling round thee,
And my heavy head at last
At thy foot might be down cast.
Lonely, lonely, on I wander,
Pathless is the world to me ;

And heaven's bright lamps burning yonder
Only light me on to thee.

By the love of passionate years !
By the grief that hath no tears !
By the memories unsleeping,
In my heart their vigil keeping ;
Of an angel wing departing,
A good spirit upward starting ;
A minist'ring form that had watched o'er me,
Vanishing in thin air before me !
Fairest of the many gates
At which death's dark seraph waits,
(The invisible gates, that lie
Undiscern'd of human eye),
Portal of eternity !
MINE thou art, and thou shalt be :
Unfold thy bright arch to me !

Vain quest ! idly to beseech
That which it may never reach !
Holy must the footstep be,
And the heart from shadow free
Of earth's shrines of imagery,
That to heaven would enter through thee.
*Holy were the martyred dead,
Holy were the lives they led ;
And no unholy step may tread
In the path that leadeth to thee.
Worcester's aged head hath pass'd thee,
London's shadow hath o'ercast thee ;
And sad Canterbury, grieving
For an evil hour's achieving,
Underneath thine arch of flame
Hath taken shelter from the shame,
The remorseful agony,
Of a wrung heart's deep repenting,
For a faint will's brief consenting ;
The unsteady step lamenting
That had turned aside from thee.

* First Chapter of the First Epistle of St. Peter, verses 15, 16.

Oh ! a dower, a gift unblest,
 Lies within the human breast ;
 Gulfs, whose depths no line may know
 Echo to its throbbings low ;
 And the bosom of the deep
 Knoweth more of rest and sleep.
Who the measure hath ever taken
 Of the emptied* heart's extent ?
Who the echo shall awaken
 That can scale its firmament ?
 Ever, as light words fall there,
 Hollow its abysses ring ;
 And the very summer air
 Enters like a fearful thing,
 Bidding at its presence rise
 Hosts of buried memories.
 Lost delights and tones departed,
 Music loved when lighter hearted,
 Footsteps that shall come back never,
 Gladness that is gone for ever.

Oh ! our life was quietness :
 Never shadow of distress
 From the cold world's pageants flung,
 O'er our roof its darkness hung,
 Or our glad hearth's lamp of pleasure
 Dimm'd by its defiling presence.
 For to him, whose clear gaze bended
 Toward the far from mortal view,
 And whose every purpose tended
 To the enduring and the true,
 What were ought that owed its birth
 Unto time and unto earth,
 Saving as life's changeful thread
 On to the unchanging led ?
 And my soul, a still lake lying,
 In his shadow silently,
 To his every look replying
 With the wave's fidelity ;
 Echoing back his thoughts unspoken ;

* Nahum, chap. ii, verse 2.

As the lake, by winds unbroken,
 With a heave, its hush'd breast under,
 Murmurs to the coming thunder :
 From the image, calm and holy,
 By his loftier spirit thrown
 Down into its bosom lowly,
 Took its colour and its tone ;
 And I breathed the breath of heaven,
 And I felt his feelings high,
 Till to me, too, there seem'd given
 Life that was not born to die,
 Making my fill'd heart partake
 Peace that never storm could break.

And the onrush of dark days
 Steadied but our steadfast gaze
 On the shadowless for ever,
 Where the storm-cloud should reach never.
 And the shuddering grasp of ill
 Made our deep hearts deeper thrill,
 And the cadence musical
 Had no sorrow in its fall ;
 And the dungeon's air before me
 Like an Eden gale blew o'er me,
 For its grated twilight dim
 Clearer shewed me only him ;
 While the aspect of the tomb
 Like an angel's face looked on us,
 And we blessed the welcome doom
 For the truth's sake fall'n upon us ;
 For to him the opening grave
 To his far home welcome gave :
 Like the threshold, beckoning whence,
 Angel fingers called him hence,
 And sweet voices' distant swell
 Chiming on his spirit fell.
 And of bliss, what more intense
 Under heaven could fate dispense,
 Than—I reck'd not how nor why—
 Side by side with him to die ?
 Mine his faith and mine his God,
 Fearless in his steps I trod ;

And my soul, too full to know
 Need of worldly store or show,
 Knew not that its treasure lay
 Within reach of earth's decay ;
 Felt not that its hopes were given
 Unto earth, and not to heaven ;
 Saw not, leaning on a reed,
 The dark doom such guilt incurs ;
 Thought not, dream'd not, that *its* creed
 Was the lost idolater's.

'Twas not till in that wide hall,
 Where, with rude throngs gathering round us,
 We but felt that danger's call
 To each other closer bound us,
 On my hush'd ear, like a knell,
 Cold the judge's accents fell .—

*" In remembrance of thy birth,
 In memory of thy sire's worth,
 In compassion for a soul
 Warp'd by evil men's control,
 Lady, the Queen's majesty
 Pardon extendeth unto thee."*

As one who, hearing, heareth not,
 I nought comprehended wholly ;
 And as one who feareth not
 Stood I in that fearful spot,
 And the truth came to me slowly :
 Part they might, and part they would,
 Whom I thought no mortal could !
 And, as if the spirit's power
 Could avert the evil hour,
 As if strength of soul could charm
 Fetters from the lifted arm,
 Wildly I appealed to him
 Who stood manacled before me,
 With commanding lip and eye,
 Alterless as destiny :
 But all around me seem'd to swim,
 And a dizzy mist came o'er me ;
 And all memories, sad and pleasant,

Past and coming, and dreary present,
Fast before me seem'd to fleet
As I flung me at his feet.

From that hour I nothing noted ;
Night and day before me floated :
All things pass'd me as in dreaming
With a strange unreal seeming.
In a stupor dim and gloomy
Time and place were nothing to me ;
Heedless of all human pity,
Lonely in the thronged city,
Without sense I wandered on,
An unmoved automaton ;
Till once more his countenance,
Mingled with the dim forms blending
In my wild and hopeless trance,
And my listless footsteps bending
Whitherso'er the phantom fled,
On I followed where he led.
Thousands, thousands, onward speeding,
Bore me with them, all unheeding,
Under tower, under gateway,
On towards the wild heath lonely,
With fixed purpose hurrying straightway :
I was following him only.

Like the wild, swamp-haunting fire,
To be seen, but ne'er o'ertaken ;
Never further, never nigher :
There he gleamed with air serene,
Through the nightmare forms between,
And his calm brow as unshaken
As if all that earnest throng
At his bidding moved along.
There, as one whose glance was full
Of a calm security,
Seeing the invisible,
Conscious of infinity,
Measuring human law and power,
The fell sway of its brief hour,
By the soul's eternity.

On he passed : his head was bare,
 And the sighing summer gale
 Lifted his dark shadowing hair
 From his forehead high and pale ;
 And about his temples play'd,
 As so often it had done
 When at vesper-time we stray'd,
 Watching down the western sun
 In the woodlands of our home,
 And heaven's night-lamps, one by one,
 Lighting in its purple dome.

On, in the deep joy of one,
 Who, this world's dark night-watch ended,
 Joys to see the orient sun,
 By morn's golden clouds attended.
 They who gazed with little heed
 ONLY gladness there might read ;
 But to mine eye, used to trace
 Every line of that still face,
 In its aspect there lay hidden,
 Like a masquer come unbidden,
 The deep shadow of a dread,
 And a sorrowful foreboding,
 As if, far beneath it spread,
 Some sad memory lay corroding.
 And he moved with steady eye
 Fixed upon the distant sky ;
 As if from some haunting woe
 Its pained vision would retreat ;
 As if in the crowd below
 Were an eye he dared not meet.

As the throng moved so moved I,
 And when they stopp'd suddenly
 I too stood, though why not knowing ;
 For I nothing saw but him,
 Where, above the dense mass shewing,
 Towering rose his figure high
 Between me and the far sky ;
 Till a burst of smoke rose dim,
 Black and massive, like a cloud,

Folding him in its dark shroud.
 At that omen I awoke ;
 Starting, through the ring I broke,
 The dark-cowled ring that bound him :
 Passionately I clung around him.
 Hurried were my words, and few ;
 What I said I little knew,
 But their import and their tone
 O'erflow'd with a wild despair :
 " *Under heaven I am alone,*
 Oh ! go not without me there !"

Fetter'd by the bolt and chain,
 His arm might not hold me now ;
 But his head a moment's space
 Mournfully bent o'er my face,
 And his tears, like heaven's rain,
 Fell upon my aching brow ;
 And his lips one moment press'd me,
 And he, fondly murmuring, bless'd me :
 And that hour our fate had sealèd
 Far as hell and heaven asunder,
 And the awful doom revealèd
 To the human heart that trusteth
 In the creatures of a day ;
 And where waste and canker rusteth
 Hath built up its shrines of clay,
 My lost spirit had come under :
 But from his death-pyre they tore me,
 Back into the crowd they bore me,
 And the chant of monkish singing
 Like a death-howl pealed throughout me ;
 And like demon fingers clinging
 Hung their ruthless grasp about me :
 And up to the unlistening sky
 Rose my shriek of agony !
 Never, its blue arch below,
 Rang a cry of deeper woe !

" *Clemence !*" 'twas his voice that broke
 The confused clamour through,
 And its thrilling accent spoke

With a meaning I well knew.
 "Clemence!" its low under tone,
 Drowning all those sounds of hell,
 Deep into my heart alone
 Like unearthly echoes fell,
 Bidding its tornado sleep,
 As a word once hush'd the deep :
 And I folded on my breast
 The cold hands that shook and shiver'd,
 And to calmness I compress'd
 Firmly the shut lips that quiver'd ;
 And before the high control
 That had strung my inmost soul,
 With a strength no voice could draw
 From its fathomless abyss,
 Save the one whose thrilling awe
 Held me in an hour like this ;
 Even as it had laid to sleep,
 Far in its recesses deep,
 All proud thoughts and selfish-hearted
 In the happier days departed :
 To all round me, lost and gone,
 Breathlessly I listened on.
 I would wander the world over,
 An untired, unresting rover ;
 I would meet all weariness,
 Pain, and peril, and distress,
 Lightly, gladly, I would brave,
 All that dwells in wind or wave ;
 Aught, each, all, I would sustain,
 Once to hear that voice again.

Calm I stood as stands the sail
 Waiting for the lagging gale ;
 Calm as is the heavy air
 Ere the lightning flasheth there :
 And I watch'd the wreathed fire
 Towering higher, higher, higher ;
 And I look'd into his face
 Till I look'd on vacant space ;
 And I saw the last faint ray
 From his deep eye pass away :

And I felt, where he had stood
 Leaning by that burning wood,
 But the cool breeze o'er me playing,
 And the dim blue flame decaying.

Hurrying footsteps pass'd away,
 And I turn'd to go as they :
Whither ? I nor car'd nor knew,
 Life had nothing left for me ;
 Heaven, beneath its vault of blue,
 Held no place where hope might be.
 Time might measure endless space,
 And the vast world might roll on,
 I should see no human face
 My cold gaze could rest upon.

Would that in the deep mid sea,
 Passionate Sappho, like to thee,
 I might fling this fever'd breast,
 By the billows rock'd to rest !
 Or like her, the Italian child,
 From her buried home exiled ;
 And shut out, by the dark fate
 Laid upon her sealed eyes :
 A sad creature, isolate
 From sweet human sympathies,
 Drop into the lulling wave,
 And its blue depths be my grave !
 But thy fetter, Truth, is on me,
 And thy stern grasp is upon me ;
 And enough of thee I know
 Just to be held back to woe.

My heart is as an open grave,
 Its early-perish'd flowers entombing ;
 While o'er its edges darkly wave
 Pale rue and nightshade's deadly blooming ;
 And time, that wastes things mean and brave,
 Ruins and tomb is both consuming.
 May but, of all those odoriferous things,
 Some scent be borne unto the spirit that flings
 (In passing) o'er the spot the shadow of its wings.

PART III.

"Then back to their own land."—*Lady Jane in the Tower.*

ENOUGH : my path is trodden, and the shore,
The final shore of this dim weary world,
Lies at my feet ; its tangled ways no more
Detain my lingering footsteps. I have done :
Father, take home thy child ! If yet thy sun,
Which shineth on the evil and the good,
On the loud throng and the still solitude,
Of my appointed task see none remain,
I would my spirit should return again
To him who gave it, in his sight to rest ;
And my fallen tent, its thin-worn canvass furl'd,
Be laid away in dust.

This tranquil breast,
Though in its pulses still the throb of life
Beat leisurely, hath long forgot the strife,
The aching turmoil, that doth ever hang
On human hopes and dreamings ; and the clang
Of jarring music, making discord fell,
Rings through its depths no longer. If on earth
I can no longer serve thee, let the knell,
The solemn-breathing curfew, murmur peace
To my strewn ashes, and the desolate hearth
Of my decayèd halls know never more
The haunting of my presence.

All is o'er,
All past, all vanish'd, that might yet have won
A half wish from me that life's evening sun
Should set in their grey shadow. I have done,
Done with the things of this world ; and this head,
Bleach'd long before its time, and these dim eyes,
Tired with looking on life's miseries,
Come gladly to lie down among the dead.

But, oh ! Lord Bishop, for thy sake I speak,
Whose blind displeasure may its vengeance wreak
On this earth-framèd tenement, ordain'd

By fire or flood, or the more slow decay
 Of wasting malady, to melt away
 Into its kindred elements : the chained
 And o'erpressed spirit, that beneath its weight
 Hath long sigh'd heavily, will homeward take
 Its glad flight but the sooner. Lonely here,
 Save for His presence, who doth stoop to make
 Light the dark dwelling of the desolate,
 It matters not unto me by which gate
 Of exit from this dark and troublous sphere,
 Thou hastenest my escape : and for the sake
 Of some deep-graven, unfaded memories,
 And for that every added sacrifice
 Is lighting up a flame throughout the land,
 Soon to spread wider than the reckless hand
 Of tyranny can compass or allay ;
 I would choose rather the well-trodden way
 By which our prelates and confessors just
 Have pass'd into their rest, leaving their dust
 By heaven's winds to be scatter'd ; and their end
 (Link'd with the faith they perish'd to defend)
 A deathless legacy to other days,
 When our sweet England, fetterless and free
 As the glad breeze that sweeps along her sea,
 Shall see her children's hearths and altars blaze
 With the calm lights of peace, and bless the names
 Of those who, faithful to their country's trust,
 Their early vows made good amidst the flames.

Were but my words the winged shafts of truth,
 Lighting up to thy time-obscur'd gaze
 The real and the oncoming !

Yet a while,
 And thy sad mistress, whose regard, in sooth,
 Is the bewildering star that doth beguile
 Thine eager steps to follow, shall be laid,
 Lonely and powerless, in the ancient shade
 Where sleep her crown'd fathers ; and the grace,
 The evanishing favour of her life's brief space,
 Law, grant, and statute, all that she hath done,
 (In despite of the good Lord Cardinal,

Who, sad for his torn country, grief o'er-run,
 The words of milder counsel doth let fall),
 All that within it hath not the clear stamp
 Of time-defying greatness, with the lamp
 Hung up by error and by truth down-hurl'd,
 Shall change and pass away. But in that world,
 The world of unveil'd truth, where thine and thou,
 And all that honour, all that follow thee,
 Shall *then* be dwelling, O ! will fate allow
 That the effacing wing of time and chance
 Sweep over the immutable ? the glance
 That looks along into eternity,
 By the angel torch of death illuminèd,
 Seeth it hope or promise to be read,
 Upon the awful front of destiny,
 Of alternation ? bringing to the soul,
 Lost in the vivid present, the controul
 Of action and occasion hurrying by,
 Forgetfulness of evil that doth lie
 Buried amid the records of the past,
 The page that, as it standeth, so shall last,
 Down in the hollow vaults of memory.

Remember, oh ! remember, thou and I
 Must hear another trumpet note sweep by,
 And stand together (not as now we are,
 But fellow suppliants) at another bar.
 I speak it not in anger, no ! oh, no !
 My fellow creature, who in this strange scene,
 Where error and illusion reign unseen,
 Must dwell a brief space longer, and perchance
 May'st live to follow the fair heritage,
 And love the truth I die for, on thy head
 A pilgrim's blessing fall ! Gladly I go
 To tread the last and the least weary stage,
 The closing valley* of my pilgrimage,
 And never shall our footsteps cross below.
 The God who hither hath my lone way led,
 Whose face illumineth the night's dark shore,
 Grant we may meet in his far Heaven once more !

On the horison, heath-embrown'd,
 With nought visible around
 But a wide and lonely moor,
 Stood, half-hidden by grey moss,
 And the briars growing across,
 A low stone sculptured with a cross,
 And some graven words, which said :—

" Upon this spot suffered
 The Lady Clemente Vabasseur.
 Pilgrim passing by this way,
 Kneel upon the turf, and pray
 Thou into that Truth be led
 For which the Martyr's blood was shed."

SPIRIT! sweet Spirit! who on Heaven's verge,
 This long time hovering, now, alas! dost seem,
 With white wings glistening in the golden beam
 Of light unrisen on this dark hemisphere,
 Too early ready thy far flight to urge
 Into the invisible; if yet the surge,
 Moaning around eternity's dim shore,
 Delay the launching bark prepared to steer
 Beyond's life's low horison; if once more
 The gale beat back thy pinion, bent to soar
 To paradise emigrant; one who brings
 To thy lov'd ear these rude notes sadly blending,
 Will bless thee for one hour of the attending,
 Ah! how soon to be given to angel strings!

OBSERVATIONS ON THE ANIMALS INHABITING
MULTILOCULAR SHELLS,

CHIEFLY WITH A VIEW TO THE GEOLOGICAL IMPORTANCE OF THE SUBJECT.

BY D. T. ANSTED, Esq. M.A. F.G.S. F.C.P.S.

OF JESUS COLLEGE, CAMBRIDGE.*

IN two former papers on this subject, I have endeavoured to give a somewhat popular account of cephalopodous animals and their shells, when the shells so far resemble those of the Nautilus and Ammonite as to be referrible to them as types: in other words, when the shell is divided into a limited number of compartments, the walls of separation being formed according to a constant law, and communicating by an aperture always retaining its relative position. It remains now to consider two cases departing from these types: one of them is the family of *Belemnno-sepia*, in which the concamerated structure appears to have been of somewhat inferior importance, and is found only in a small portion of the shell; the other is D'Orbigny's family of *Foraminifera*, and is characterized by the peculiar and varied forms of the chambers, which communicate only by small, irregularly-placed apertures, bearing no relation to, and not having the same use as, the regular opening for the siphuncle in the *Ammonoata* and *Nautilacea*.

Although the species of *Belemnno-sepia* are tolerably numerous, and the specimens very abundant, yet all of them belong to the same genus; and we may at once proceed to consider the nature of the shell and other parts found fossil, and then, as in the *Siphonifera*, trace from analogy the probable habits of the former possessor, and its connection with, and bearing upon, the other genera of *Cephalopoda*.

As it is usually met with, the Belemnite is of a more or less cylindrical form, but always coming to a point at one end, and sometimes swelling out at the other, and presenting a funnel-shaped aperture, in which is often contained a series of concavo-convex plates, greatly resembling in appearance a pile of watch glasses heaped upon each other, every one smaller than those below it, and rising into a cone. Such is the appearance of the fossil, we say, as it is usually found; but it is very necessary to consider how far

* Concluded from page 284 of the last number.

correction and explanation are required, to allow for the alteration produced by a long entombment in a more or less calcareous stratum. There are few instances, perhaps, where this kind of inquiry is more wanted, than the one before us. In the first place, the structure of the solid part is fibro-calcareous, and its weight considerable; but if this now stony mass be exposed to great heat, a strong smell is emitted, resembling that of burning horn, just as would happen if a frame-work of horny membrane—cellular as all organised matter is—had been petrified by the infiltration of carbonate of lime, which, we know, would fill up the empty space, and, providing the structure were originally fibrous and radiating from an axis, would present precisely the appearance which the fossil Belemnite does present. It is so highly improbable, and contrary to all analogy, that the hard parts of a highly organised animal should consist of a thick, heavy, stony cylinder, of considerably greater specific gravity than the fluid in which it lived, and so clear from actual observation that horny matter did enter into the composition of this curious organ, that there can be little doubt of its having been, when forming part of an animal, a light horny skeleton, and converted afterwards, and by a slow process, into its present petrified condition.

But, secondly, the contents of the aperture are by no means to be taken as the real substance which once was included in the body of the animal. The series of plates we have alluded to merely serves to give us an idea of the shape of the once empty chambers, whose septa, or walls of separation, filled the space between them. This conical interior (called the alveolus) is, in fact, all that remains of the chambered portion of the shell, and resembles an Orthoceratite in its general appearance. It is not unlike that fossil in structure and use, as well as in external configuration.

Again: we have said above that the Belemnite sometimes bulges out towards the larger extremity; but this description gives a very faint idea of the nature of the aperture and parts connected with it, from which, indeed, the most interesting and instructive facts are learnt. Commencing at the base of the hollow cone of the sheath—as the fibro-calcareous part is called—there is now known to have extended a horny cup, in which great part of the viscera, &c. of the animal, were included; and besides these a quantity of black fluid, capable of being spirted out, at a moment of danger, to darken the water, and give time to the animal to escape from its enemies.

We can now understand the more correct and complete definition of a Belemnite, namely, that it was made up of three parts—a skele-

ton, whereto the muscles were attached ; a pouch, in which the animal was contained ; and a concamerated shell, to act, probably, like that of the Nautilus, and give the possessor a great facility in altering its depth in the water, and so of more readily obtaining food and avoiding danger.

It was mentioned just now that one of the parts of the animal contained in the horny pouch of this fossil, was known to be a contrivance for secreting and emitting a black fluid, to darken the water about it. Now it may fairly enough be asked what proof we have of this ; for it must seem a strange thing to one unaccustomed to these investigations, that we thus speak positively upon a matter which does not, at first sight, seem capable of very clear elucidation. Few things, however, can be more clear or certain ; and the reason of this will soon appear.

It is conjectured that at certain periods during the formation of the beds of chalky clay called *lias*, there occurred submarine eruptions, suddenly destroying the lives of vast numbers of animals, and burying all together in one heap of mud. At all events, we occasionally find various remains of saurians, fish, and other genera of lower organisation, so perfectly preserved as to make it evident that some very sudden cause of death must have existed to allow of their being deposited in that state.* What this cause may have been we will not speculate on at present ; but the effects remain, and not the least remarkable amongst them must be considered the existence, at the present day, of the fragile and destructible ink-pen of a *sepia*, and the very dried fluid itself, capable of being worked up still into a good and perfect pigment. We will speak of this horny ink-bag and ink a little more in detail ; and since it is very nearly the same in the fossil as in the recent state, we might from either describe the contrivances, which had clearly the same object in both.

There is a singular resemblance between the structure of the ink-pen in the *sepia*, and the wing-feather of a bird ; and to this resemblance, it is clear, the name is owing. We find in both a broad central shaft, with long narrow filaments transversely placed, and extending on each side of the shaft ; but the similarity, of course, ceases when we come to internal structure, and is not, indeed, entire in the general appearance.

* I may remark here that it is by no means the case that such sudden destruction will account for the formation of any considerable portions of this or any formation. Generally speaking, there is abundant evidence of the *slow* deposition of fossiliferous beds ; and the exceptions are rare and very local.

The filaments in the ink-pen of the cephalopod terminate on each side in a straight line, which makes an acute angle with the outer edge of a marginal band, separating the filaments from the body of the shaft. The shaft itself is divided lengthways into two parts, and is formed of thin horn-like plates laid on each other, and composed of alternate longitudinal and transverse fibres. The whole contrivance is connected with a bag containing the ink (which is of the consistence of pap, and suspended in the cells of a thin net-work, filling up the interior of the bag); and at the least alarm it is spirted out, and discolours the surrounding fluid. The rich brown colour called sepia, and the still darker one known as Indian ink, are manufactured from cephalopodous animals now living in the Indian seas; and, as we have already observed, the dried carbonaceous matter in the pouches of similar animals found fossil might be, and indeed has been, worked up into a pigment, and is then not distinguishable from the best of that which is commonly to be obtained.

Having described this contrivance in known animals, we come next to consider whether there is proof that in the genus before us—that of *Belemnites*—a similar contrivance existed; and, if so, how far the now extinct animal may have resembled the yet living sepia and other Cephalopoda.

Till lately, no absolute proof had completely silenced the doubt as to whether the fossil pouches and ink-pens had once belonged to the shell called *Belemnite*; for the horny termination of the calcareous sheath had not been found connected with the fossil. The matter, however, is now entirely set at rest by the discovery, first, of the horny sheath forming a continuation of the calcareous part to a distance equal to the length of that solid portion; and secondly, and most conclusively, by two complete specimens, noticed first by Prof. Agassiz, each containing an ink-bag within this anterior horny portion. More recently, the ink-bag has often been obtained in connection with the horny sheath, and the horny continuation has been found in many individuals of well-known species of *Belemnite*; so that the fact of the co-existence of all these parts in the same animal is no longer to be doubted. It may be observed, lastly, that casts of the chambers are very commonly found in the open end of the fossil; and we have, therefore, now gone through, and connected, the chief points in the natural history of the animal, so far as it is indicated by organic remains still existing.

It will be seen, from this description, that the natural family of *Belemno-sepia*, thus brought under our notice, appears to form a link uniting the peculiarities of the common sepia, and other free-

swimming Cephalopoda, with those of the Nautilus, and still more the Ammonite and other extinct genera. It is, indeed, an extraordinary thing to find apparent breaks in the great chain of Nature thus supplied from a former, but, in many respects, analogous state of existence: but such discoveries can never lose their interest by becoming too common. It is a source of pure delight, no less to the comparative anatomist than to the more humble student of Nature's works, thus to trace order and a system where such things appear least to exist; and when, as in the case before us, the materials have gradually accumulated, and the truth at last comes clearly out from among a mass of error, we cannot but be peculiarly interested: and the result is well worthy of general attention.

As we have now pointed out the analogies with other genera, as well as the peculiarities in the genus before us, we may give the following as a probable description of the animal of the Belemnite. It resembled, doubtless, in shape, the conical—or rather *nine-pin*—contour of some kinds of Cuttle-fish yet living; but as it was provided with a strong internal shell, seems to have been, on the whole, better defended than they are. Besides the shell, it had a siphuncle, often sufficiently large, running through the air chambers, which, as they were defended by the external shell, neither required nor possessed any contrivance for increasing their power of resistance. The action of this siphuncle would tend to give the possessor great facility in ascending or descending in the water; and thus the animal might be able to obtain food at various, though perhaps not at extreme, depths. The provision of ink, too, the bag for its secretion, and the contrivance for its excretion, clearly point out a means of escape from enemies; and we know that these cephalopodous animals, although their suckers and long arms are admirably adapted to grasp and convey to the mouth the prey upon which they subsist, would nevertheless be left, so far as weapons of offence are concerned, utterly helpless against the voracious fish and saurians which then abounded in the ocean, and were doubtless their natural enemies. Their means of escape must, however, have been tolerably efficacious, as they could at once shelter themselves in self-created darkness until the concamerated structure and the siphuncle had been brought into action, and the animal had sunk and was lost to its pursuers. The modern species—the sepia, octopus, &c.—not provided with the additional contrivance of the siphuncle, have not, apparently, so many enemies to guard against; and it seems probable that the Nautilus, Ammonite, &c. having external shells, are, and were, by them sufficiently protected.

Having now concluded our remarks on the *Belemnosepia*, we come, in the last place, to the family named by M. D'Orbigny the "*Foraminifera*," so called, as we have already mentioned, from the unconnected holes or foramina in the septa, through which no tube passes, and whose existence, so far as we know at present, is of small importance in the structure of the shell.

Unfortunately for the general understanding of this part of the subject, the species, both recent and fossil, which are included among the *Foraminifera*, are, for the most part, so small, and their structure requires commonly such very minute and careful examination before it can be at all understood, that few have turned their attention to so unpromising a branch of natural history; and there is even great difficulty in communicating the little knowledge we have in a convenient and popular form, especially without the assistance of figures. It is certainly somewhat remarkable that out of fifty-two genera, comprising altogether many hundred species, which are found in such vast abundance, both in a recent and fossil state, that, on the one hand, we have whole mountains made up of them, while, on the other, they almost render the ocean, in many latitudes, alive with their countless myriads; notwithstanding all this, it is probable that a very small proportion of my readers will be aware of having seen a single specimen, or feel confident in identifying one genus, even after they have read the description about to be given. Perhaps, however, one reason for so curious a fact will, in a great measure, clear up the mystery; for it must be admitted that where the dimensions of any species of this great family are sufficiently large to bear examination by the unassisted eye, the form is so very unpretending, and bears so little resemblance to any thing organic, that more than a superficial glance is required to distinguish the specimen from a shapeless stone; while, in the great majority of species, the shell is so extremely minute that it might pass muster for a grain of sand or a particle of dust.

Still, to the naturalist, there is something attractive even in this minuteness and obscurity. We love to be exclusive in our devotions: and who is there, eager in the pursuit of science, who has not some little exclusive favourite—some little idol of an opinion or experiment—which he fondly fancies is confined to himself and his own little circle? It is fortunate that such is the case; for to this feeling, perhaps, we owe much of minute and laborious research, little rewarded by the multitude, but carrying its own recompense with it, and requiring nothing more.

But to proceed. In order to give as definite an account as possi-

ble of this very curious branch of conchology, and that there may be something tangible—some real foundation of knowledge, upon which the superstructure of opinion and theory may ultimately rest, it will be of advantage to describe in some detail a single genus of Foraminifera. There is one peculiarly fitted for our purpose, since, while it is marked by the distinctive characters of the family, it bears, at the same time, some analogy to known forms. It is of a size and appearance which readily admits of examination; and is so common that only neglect and carelessness have hitherto prevented it from being noticed more universally. The name of this genus is "Nummulite;" and it is derived from the appearance of the shell, which closely resembles that of an old and much-worn coin. It is circular, discoid, and thicker in the middle than at the outer edge. There is no appearance of organisation externally, for the edge appears the same round the whole circumference; but when one of the faces is ground down to the mesial plane—that is, when the shell is reduced to half its thickness—the internal structure becomes visible, and is seen to consist of a vast, but indefinite, number of small chambers, having the walls which separate them oblique to the aperture, and each septum perforated with a small hole, irregularly placed, and not connected by any siphuncle. These successive chambers are wound into a spiral, and the resemblance to the Ammonite is sufficiently near to give some notion of the form and structure; while the facts—first, that there is no chamber beyond the last septum or partition; and secondly, that no connecting tube can have passed through the irregular small aperture in the septa—are quite sufficient to show that the shell we have described differs in very essential points from any that have hitherto come under our notice.

A very considerable proportion of the species of Foraminifera determined by M. D'Orbigny, are now living in the Mediterranean or other seas of warm latitudes, and most of these have been examined by that indefatigable naturalist or his sons. As the general result of his investigations, it may be mentioned that the animals have, for the most part, a purse-shaped body, in the posterior part of which the shell is found; that the body is very large, compared with the head and tentaculæ, which, indeed, at a moment of danger, may be entirely drawn within the extensible folds of the skin of the anterior part. The tentaculæ are very numerous, and are ranged round the aperture of the mouth, which is, as usual in Cephalopoda, in the centre of the head.

The connection between the animal and its shell, or skeleton,

seems to be extremely slight, for they separate at the slightest touch at the moment when decomposition begins to take place after death ; and then the chambers of the shell are found filled with a coloured liquid, the intensity of the colour being greatest in the last chamber. The smallest change in the usual habits of the animal is sufficient to destroy life ; and, owing to the extreme rapidity with which decomposition goes on, it is very difficult to observe the structure accurately. Of European seas, the Adriatic seems to be the favourite resort of these animals ; they are found chiefly near the coast, and in shallow water, feeding on the various polyps which abound in such localities.

One very interesting point—but it is, at the same time, one very difficult to investigate—is the mode by which the shells increase, whether by gradual and daily growth, or by the sudden and periodical addition of a complete chamber. On the whole, it seems probable that the latter is the case, and that even when the last chamber is larger than all the rest, it is still added by a sudden and rapid effort, although doubtless a great displacement of certain parts of the animal is thereby produced.

Since, however, the peculiar way in which the new chamber is added, determines the shape of the shell, we have thus the groundwork of a system of classification which, after great labour and long observation, M. D'Orbigny declares to be the most convenient and the best, being dependent on the natural relations which connect the genera, and govern their distribution into separate groups. Of these groups he has named five, as comprising all the fifty-two genera with which he was acquainted ; and we now proceed to give some account of them, digressing occasionally to remark upon any particular genus, interesting from its occurrence in a fossil state.

The first group comprises eight genera, in which the shells are formed by the simple superposition of one chamber upon another, all having the same axis : just as if one were to place a series of hollow cones, of equal bases but different altitudes, one upon another, the highest being the outermost. This structure, indeed, if the lower part of the cone is supposed rounded off so that the whole may be pear-shaped, and we leave small apertures at each apex, then resembles very much the genus "*Nodosaria*" of Lamarck, and will serve to give a tolerably correct idea of the peculiarities of this first group, to which it is referred. The shells of all the genera thus connected are vitreous, and more or less brittle ; and of the species known rather more than half have been met with fossil in various

tertiary formations. The recent species are chiefly from the Adriatic, although a few of them are natives of the British coast.

The shells of D'Orbigny's second group are not so simple in their construction as those we have just described. The chambers do not form a regular spire, although that is the apparent shape; but they are placed alternately right and left, piled upon each other on two or three distinct axes; sometimes the septum of the right hand chambers overlapping more or less those of the other side, and sometimes merely touching. The apparent spire often resembles that of the common univalve shells, *Cerithium*, *Turritella*, &c.; but occasionally it is more rounded, the apex being obtuse and more like the shell called "Pupa." There are seven genera referred to this group, and between sixty and seventy species: the shell is always porous in its structure, and the exterior rough and irregular. More than half the species occur fossil, but most of these belong to one genus, the *Polymorphina* of D'Orbigny, characterised by the simple alternation of the chambers and the roundness of the aperture. Twenty out of the twenty-eight species of this genus are found fossil in the Paris Basin. Besides this, one other genus has nearly half its species fossil, and one is confined to a single fossil species.

The third group contains those shells of which the component cells are arranged on one, or at most two, distinct axes, but which form a decided spiral by their mode of increase, the spiral being in some cases elevated, and in others flattened. This group has been sub-divided into three sections, which we will consider separately, as each contains some of the most remarkable and abundant fossil species, a very large proportion of which—as many as one hundred and thirty-three—are referred to this important sub-division of the Foraminifera.

The first section comprises ten genera and sixty-two fossil species, all of which have the chambers arranged on a single axis, and forming a spire more or less elevated. Some of these have very singular shapes, which are perfectly indescribable without the aid of accurate models, or at least engravings. The most interesting to the geologist of the genera of this section is that called *Rotalites*—the "*Rotalia*" of Lamarck and D'Orbigny—which contains thirty-two fossil species, chiefly met with in the tertiary beds of Bourdeaux. The shell is trochiform and regular; the spire sometimes prominent, sometimes flattened; and the aperture is a longitudinal slit opposite the penultimate whorl, usually unprovided with marginal appendices, the occurrence of which, however, in some species, has been

considered sufficient ground to separate and form them into a sub-genus.

In the second section, where the shell is discoidal, but the whorls of the spire visible, the most interesting genus is that which has been called "Lenticulites"—the "Operculina" of D'Orbigny. It is common among the fossils in the neighbourhood of Bordeaux, Dax, &c., and bears externally considerable resemblance to an Ammonite.

The third section differs from the second very much as the Nautilus differs in appearance from the Ammonite: the whorls of the spire successively embrace all but the last, and so none but the last is visible. The fossil species of Spirolinites, Cristellaria and Nummulites, all belonging to this division of the group, have long been looked upon as the most important among the fossil Foraminifera. They are in number about thirty; but the individuals of these thirty species are so widely distributed and so singularly abundant, especially in the case of the Nummulite, that whole mountains are made up of them, and in some countries their remains form no inconsiderable portion of the solid masses of limestone used for building. It may be quoted, as an instance of this, that some of the great pyramids of Egypt are built of "Nummulite" limestone—in other words, are chiefly made up of little lenticular shells, few of which are so large as a half-crown piece, while by far the greater number vary in size from that of a small pin's head to about three quarters of an inch in diameter.

The Spirolinite is a genus at present only known from fossil species, which bear some resemblance to the siphoniferous species, Spirula and Lituite, the spire projecting, at a certain age, in a straight line, and then forming a cylindrical tube. In this, as in many other genera, the septum of the young individual is provided with several apertures, although afterwards the number diminishes; and when the animal has attained a certain age there is only one to be observed.

The Cristellaria occur both fossil and in a recent state. In external configuration, the shells of this genus may be compared to the Argonauta, since the point of the depressed spire is eccentric; but, like all the other Foraminifera, they are divided into a multitude of little cells opening into each other, though without any siphuncle passing through them. The fossil species are chiefly from the Coronicine (Italy), although several are found in the limestone at Caen.

Of the Nummulite we have already spoken. Its remains abound

chiefly in the upper secondary strata of the Alps, Carpathians, and Pyrenees, and in the tertiary limestones of Verona and Monte Bolca. They are there numerous as the sands upon the sea-shore: and even if we imagine that their former possessors swarmed in the ancient seas, and cleared away the redundancy of animal life by the free indulgence of their carnivorous propensities, still it requires no slight effort of the mind to look back through the long vista of departed ages, and consider the amount of time which must necessarily have been required for the gradual accretion of mountains of small shells, each of them once performing a part, doubtless very important, in an animal of high organization, created for a wise purpose, living its appointed time, and then dying, but leaving as a bequest to futurity its little skeleton, to form afterwards, when united with many others of its kind, a prominent and useful portion of the crust of the earth. No such honour awaits the remains of the elephant, the rhinoceros, or the whale, gigantic as are their forms; nor can even man expect that his remains, and the work of his hands, will thus mingle with nature's works, and assist in forming the future surface of the globe. It is only the smallest and most unpretending, the apparently most insignificant of animals, which, admitting of vastness in number rather than in size, and multiplying with a rapidity utterly baffling to all our powers of comprehension, thus produce gigantic effects from causes, to all appearance, inadequate, and leave monuments that endure from generation to generation, till the gradual wearing of atmospheric agents, or the more rapid alteration effected by subterraneous fire, shall cause the particles once aggregated by the living principle to enter into new chemical combinations, and so alter and destroy the organic structure.

Thus does the geologist look back into those chapters of the history of the globe written only in the hieroglyphic of nature, and telling of conditions long since changed; and then forward to other and future periods, when the "time and chance" that happen to all shall have worked new effects from old causes, and given more evidence (if more were wanted) of the wisdom, the greatness, and the power, of that Being who framed the laws which govern matter, and the creatures created of it.

If it excites our surprise, as it well may, that the organic remains of the Nummulite form a sensible proportion of the actual mass of which the earth is composed, although an individual specimen rarely possesses a diameter of more than half an inch, what shall we say on learning that there is another genus (*Miliola*), referred to D'Orbigny's fourth group of the Foraminifera, which, although it ne-

ver attains the size of an ordinary pin's head, still, by its indefinite multiplication, forms a considerable portion of the mass of the extensive tertiary formations in the neighbourhood of Paris. Nor is this almost incredible abundance of exceedingly small organised bodies at all so rare as might be expected; and there is good reason to believe that, as science advances, and accurate observation is directed to the various calcareous sands which are so often met with in the older formations, we shall find more and more reason to wonder at the profusion of nature at all periods, in giving life to numerous minute species of animals, whose real importance in the great general system is a matter yet to be clearly explained.

This genus—the "*Miliola*" of Férussac, so called from a fancied resemblance to millet-seed—embraces the six genera which compose D'Orbigny's fourth group, and, as we have just mentioned, is extremely abundant among the fossils of the Paris Basin. In it the chambers are clustered in various modes upon a common axis, each chamber being of the whole length of the shell, which is thus gradually enlarged, very much as we may conceive the successive coats of a bulb, such as the onion, to increase the whole in length as well as thickness; only it must be remembered that the size of the last chamber is not quite sufficient to surround the former ones, and the result in this, as in most of the Foraminifera, is an odd anomalous appearance, very difficult to describe, and which can only be understood by studying the models of the principle microscopic genera, invented by M. D'Orbigny. As many as forty-one species of this interesting group are found fossil, more than half of them in the neighbourhood of Paris. The whole number of species known, including the recent ones, amount to about a hundred.

The fifth and last of the great sub-division of the Foraminifera, according to M. D'Orbigny's classification, is marked by the separation of the chambers into numerous cavities, by partitions or small tubes. There are five genera and but nineteen species referred to this group: nine of the species occur fossil, but no very particular interest attaches to any of them, although one genus, the—"*Fabularia*"—possesses a very remarkable structure, the chambers being divided into a great number of tubes, and having many apertures placed alternately at either extremity,

Such is a faint sketch of a branch of natural history, perhaps the most curious, as it is undoubtedly the most obscure and difficult, of any that has hitherto attracted the attention of scientific men. Our outline is, as might have been anticipated, crude, dry, and incomplete: it is, for the most part, a mere statement of names and num-

bers, and possesses perhaps hardly sufficient interest to reward the curious reader for the labour of perusal. Would that it were otherwise ! Would that any exertions of ours were sufficient to put forward in its course this most unattractive, although most useful, work.

It was mentioned, at the commencement of our remarks on these Foraminifera, that the species were, for the most part, extremely small. No means of judging of the size was, however, given ; and to those who have not before studied the subject at all, it will, doubtless, excite astonishment when they learn that this minuteness is sometimes that of a grain of sand, sometimes a mere point, in which no organic structure can be at all recognised by the unassisted eye, but never in any instance, except that of the Nummulite, offers a surface for examination so large as a grain of Indian corn. Commonly the size is about that of the small [o] in the type before the reader ; and it is more frequently less than greater. The difficulty of managing such very minute objects, and determining accurately their structure, both external and internal, will be appreciated only by persons accustomed to delicate microscopic investigations. To others it must be sufficient to put the facts before them, and leave them to wonder at the patience and quiet industry of the one or two who have devoted long years to the improvement of science in this department.

It must not be concealed that—after all the laborious investigation of M. D'Orbigny, and the conclusions to which he arrived after a very long series of actual observations by the sea-side—some naturalists have denied that the animals of all of these shells are really cephalopodous. Many of them, so small as to be found clustering round the minute branches of sea-weeds, are there fixed, either by the voluntary act of the animal, or by the adhesion of the shell itself ; not, indeed, that the shell actually touches the body to which it is affixed, for it is always, as we have said, internal : but in this latter case the skin-like covering, or sac, which contains the animal, is the only substance that intervenes. In these genera, the organisation must, undoubtedly, differ very widely from the type of the Cephalopoda, whose structure is far more complicated than is met with in animals deprived of all power of locomotion : and unless accurate and minute anatomical research absolutely demands their being retained in this class, they certainly can hardly be considered as belonging to it. With regard to the use of the shell in the Foraminifera, all that can be said at present is, that it acts most probably as a float ; and in this way may be peculiarly useful to cephalopodous animals, from its

position in the lower part of the thimble-shaped body, which is thus naturally, and without muscular effort, kept uppermost in the water, although, unless there were some contrivance of the kind, it would probably be the heaviest part, as containing the closely-packed viscera. If the reader has not forgotten what was said of this class of animals at the commencement of our essay, he will perceive how perfectly convenient to them such an apparently unnatural posture—the head being the lowest part—must be, for all the purposes of feeding and other functions of life.

We have now gone through the different groups which compose the two great divisions of cephalopodous animals provided with multilocular shells. We have considered first the probable nature and habits of the Ammonacea, as deduced from the somewhat analogous family of Nautilacea; then, blending our knowledge of Nautilus and the naked sepia, we have applied the result to inquire concerning the animal to which the Belemnite formerly belonged; and now we have been considering the nature of the more minute, and occasionally more obscure, owners of foraminiferous shells. The habits of these last, indeed, are not very satisfactorily determined; but there is little doubt that they, for the most part, swim freely in the ocean, although the fact of some problematical genera having been observed permanently attached to marine substances, seems to form a curious and anomalous exception. It has been our object all along to give a simple, unexaggerated statement of the present condition of knowledge on the subject discussed, occasionally throwing out our own ideas, indeed, to serve as hints, but in this only performing the imperative duty of every one, at all interested in the progress of science. We assume no higher office than the unpretending one of indicator: standing, we trust, on the high-road of scientific research, we point the way to a path as yet but little trodden; but it is a path not without its flowers which those who search diligently will find abundantly. If these flowers are small, they are not the less sweet; and the wreath that is woven of the humble violet administers, perhaps, fully as much to the happiness of the wearer as that in which the laurel tells of loftier conquests and more rapid advancement. It should never, however, be forgotten, that really important progress in any branch of science is made up of the simultaneous advance of a large number of separate departments; and although this is not always seen—for the rapidity of the forward movement, when it does take place, dazzles the eye and confuses the understanding—yet it is not the less true that every thing of real interest and utility is attained only by cool, calm, minute research,

directed, not to the most promising, but often to the darkest and most obscure, points.

Let not the bearing of this observation upon the subject before us be lost sight of. Geology is, and has been for some years, making progress with a rapidity and certainty marvellous, and almost incredible; but this has been because its votaries have not disdained to search in the quarry and the mountain side, in the deep mine and the water-course, for the true interpretation of nature. The naturalist, the anatomist, the chemist, the mineralogist, all have lent their energies to the prosecution of the great work: and they have succeeded gloriously. But it is not difficult to foresee that if they slacken their efforts—if they leave the examination of nature, and resort to theory before the chain of evidence is complete—at that moment their steps will become retrograde, and their advance change into a retreat. How important, then, is it that every step should be sure, every fact, as far as possible, decisive! But since it is clear, to every one at all acquainted with the subject, that the remains of organised matter enter largely into the conditions of every geological problem, therefore their study becomes highly important, and deeply interesting.

Now, in all the successive marine deposits, some species of one great natural family are invariably met with. This family is the Cephalopoda; and it is of all others the most widely distributed, the most numerous, and, what is almost of more consequence than either, the most persistent in generic character. Forming as it does the connecting link between the vertebrated and invertebrated animals, the distinction even of species is, as might have been anticipated, more decidedly marked than in any other testacea: and every thing seems to point attention to this, as the one class of all others the most important to every student as well as teacher of geology.

If, indeed, zoology is to be brought to bear upon our science, so as to multiply facts and increase the value of evidence—if, in considering the older and more widely spread formations, the study of organic remains is to go hand in hand with mineralogical and lithological characters—if we are to judge of contemporaneity of rocks by the identity and parallelism of species—then, in all these cases, does it behove us to study well the whole natural history of the Cephalopoda, for in them chiefly, if not entirely, must we expect to find the important connecting links, and by their assistance solve the great questions at issue.

AN HISTORICAL SKETCH OF FRENCH LITERATURE.

IV.—ON THE TENSONS, AND THE COURTS OF LOVE.

“ Where throngs of knights and barons bold,
In weeds of peace, high triumphs hold,
With store of ladies, whose bright eyes
Rain influence, and judge the prize
Of wit or arms, while both contend
To win her grace, whom all commend.”—*L' Allegro.*

HAVING now traced the rise and progress of Provençal literature, with all its chivalrous accompaniments of love and gallantry, and having likewise stated the apparent causes to which we may attribute its decline and ultimate decay, it remains for us to notice, at greater length, the various forms of composition which distinguish the poetry itself.

Of the literary reliques of the Troubadours, the most numerous, if not the most instructive and interesting, are decidedly the *Tensons*.* In these compositions, two or more rival poets,

* These compositions will be read with a two-fold interest, when we remember that the recitation of one of them liberated from his foreign prison our own Richard “of the Lyone’s Hearte.” We have already (page 106) regretted the loss of this interesting production; it may, however, not be uninteresting here to notice the *tenson* which has been generally ascribed to Richard, and has been treated as such by Bishop Percy and Dr. Burney, and printed in their works. The source, however, from which they have derived it, is of an entirely fabulous nature, being a series of songs entitled, “*La Tour Tenebreuse et les Jours lumineux, Contes Angloises, &c. composés par Richard, surnommé Cœur de Lion,*” &c. Paris, 1705. The whole work is, however, a mere fabrication; and the *tenson* of Richard has been unnoticed both by Sismondi and Walpole. As it may not, however, be altogether uninteresting to some readers, we give the song in the Provençal, with the translation by Dr. Burney.

BLONDEL.

Donna vostra bentas
Elas bellas faissos
Els bel oils amoros
Els gens cors ben taillats
Don sien empressenats
De vostra amor que mi lia.

BLONDEL.

Your beauty, lady fair,
None views without delight;
But still so cold an air
No passion can excite:
Yet this I patient see
While all are shunned like me.

in alternate couplets of contest and altercation, exhibited their powers before a brilliant audience, and contended for the mastery of verse. The subjects chosen for these poetical debates were, as may be imagined, generally of a chivalrous or amatory nature; and not unfrequently in these, as in graver consultations, each party, after exhibiting all possible ingenuity and zeal in the defence of his own, and the refutation of his opponent's views, remained of the same opinion at the conclusion as at the commencement of the argument. The decisions were, however, generally referred to particular arbitrators, or otherwise to the Courts of Love, which we shall presently notice. It is not a little remarkable that, with the exception of those recorded by the Courts of Love, we possess the decision of only one arbitrator. This solitary relique is to be found in a *tenson* between Giraud Riquier and Guillaume de Mur, in which the former proposes the following question as the subject of debate. "Of two wealthy barons, which is the more estimable, he who expends his wealth for the benefit of his friends and companions, to the exclusion of strangers, or he who spends his all among strangers, forgetful of his own kindred and friends?" After some argument an arbitrator is chosen, who thus pronounces his decision: "Guillaume and Giraut have requested my decision in a contest which both have carried on with wit and genius. Guillaume has ably contended for the baron who gives his wealth to strangers, and Giraut has defended the one who expends it on his friends, to the exclusion of foreigners. I, therefore, wishing to speak the truth, now decide, and say that though it be estimable to do good to all men, yet the greater praise is due to him who first benefits his own friends."^{*}

RICHARD.

Si bel trop affansia
Ja de vos non partrai
Que major honorai
Sol en votre deman
Que sautra des beisan
Tot can de vos volria.

RICHARD.

No nymph my heart can wound
If favour she divide,
And smiles on all around,
Unwilling to decide:
I'd rather hatred bear
Than love with others share.

See Percy, *Reliques of English Poetry*, p. 29-31; Burney, *History of Music*, vol. ii, p. 236-8; Favine, *Theatre of Honour and Knighthood*, tom. ii, p. 49 Fauchet, *Recueil de la Langue Françoise*, p. 93.

* A modern French translation of this Provençal version of the old saying, "charity begins at home," will be found in Millot, *Hist. Litt. des Trouv.* tom. iii, p. 109. The original Provençal, which we have here given, is printed also in Raynouard, *Choix des Poesies des Troubadours*, tom. ii, p. 107; and in Diez, *Poesie der Trouv.* p. 191.

The defence, however, of some disputed argument, was not the only object of the *tenson*; on the contrary, we find that satire, love, revenge, and friendship, are all, in turn, discussed. Sometimes it consisted merely of a series of invectives between the rival poets; and sometimes, assuming a more pleasing aspect, it breathed only of love, and as the medium of exchanging vows of fidelity and devotion between two lovers, must be considered as a love-song in the form of a dialogue. In some cases the number of debaters exceeded two, in which case it was called a *Torneyamen*. A specimen of this species of composition is given by Raynouard,* in which three gallant knights maintain a warm dispute as to the comparative favour of a look or a touch from their mistress. It was customary for the poet who undertook to answer any of the questions which might be proposed as the subjects of debate, to frame his reply in a stanza similar in measure to his antagonist's proposition, and very frequently having the same rhymes. It is from this circumstance that it has been supposed that these productions were each, like the *Eclogues* of Virgil, the entire work of one poet. There is, however, abundant proof that the *tensons* were, what they purport to be, the extemporaneous effusions of rival poets, as, in addition to other historical proofs, they bear evident marks of the jealousy and undisguised animosity of their authors.† There are, it is true, some few remaining specimens

"Guillems m'a dat et Guiraut pensamen
De lur tenso jutgar, don m'an somes;
En razos es l'us a l'autre ginhos
D'est dos baros, que donan engalmen;

Guillems mante sel c'als estranhs valer
Vol, non als sieus, don sa razos et fortz,
E Guiraut sel c'als sieus fa be tot l'an
Et als estranhs non ten per pauc ni gran.

E nos avem volgut conselh aver
E dir lo drog, e dizem que conortz
Es de pretz dar e bos faitz on que an;
Ma pus fin pretz a selh qu'al sieus l'espan."

* Raynouard, *Choix des Poesies des Trouv.* tom. ii, p. 199; Sismondi, *Litt. of the South of Europe*, tom. ii, p. 106.

† See Sismondi, vol. i, p. 137, who, as a specimen of the animosity of the poets, cites a *tenson* between Rambaut de Vaqueiras and the Marquis Albert Malespina, two of the most powerful and vallant captains of the age, in which they mutually accuse each other of *highway robbery* and *perjury*. There is also abundant proof, from the compositions of the Troubadours themselves, that the *tensons* were the productions of more than one author; what can be more decisive than the following, in which one poet cries to another, "Ha!

which are undoubtedly the work of one poet; in these cases, however, the dialogue was carried on with some incorporeal or inanimate object, as the Deity, love, or a mantle.

From the almost endless variety of questions debated in the *tensons*, which meet us everywhere in the works of Raynouard, Diez, and Millot, we have selected a few, which will give us a tolerably accurate idea of the favourite subjects of discussion:—

“A noble knight loves a lady, who returns his love; he has, however, long neglected to visit her, and knows that if he repeats his visits she will renounce his love. Ought he, therefore, in this case, to see her again?”*

“One lover is so jealous that the merest trifles alarm him: another is so blinded by his passion that he perceives not that his beloved prefers another. Which of the two is the truer lover?”

“Which are the greater, the pleasures or the pains of love?”

“Ought a lady to do as much for her lover as he for her?”

These questions, empty and trifling as they are, were frequently debated at great length, and several of the arguments display considerable ingenuity, though it must be confessed that the greater part are insufferably dull and insipid, though perhaps useful, as presenting us with a faithful portrait of the licentiousness and degradation of the age. Before, however, we so hastily condemn these compositions, we should duly remember the manner, the place, and the time in which they were recited. We must first bear in mind the fact that one of the distinguishing marks of the poetry of the Troubadours consisted in the abundant and varied use of rhyme:† this

Falconet, well met: I am glad that you are here again, for 'tis long since we have had a *tenson* together.”

“En Falconet, b'em platz, car es vengutz
Que lonc temps a no fi ab vos tenso.”

Raynouard, *Choix des Poesies*, 4to. tom. v, p. 147; Diez, *Poesie der Troub.* p. 188-90.

* The question is proposed by Hugues, and Bertrand, his antagonist, answers that “the knight should immediately visit the lady;” to which, however, Hugues replies, “You appear to be entirely ignorant of the tender passion; for, in love, the more affable you are the less you gain.”

“On plus vos fai de be, meins hi guazanha.”

Histoire Littéraire de France (par les Moines de S. Maur), tom. xix, p. 600; Raynouard, *Choix des Poesies des Troub.* tom. iv, p. 217.

† Want of space alone prevents the examination of the various hypotheses on this interesting subject: suffice it to say that Sismondi, Ginguené, and

was, in fact, the very ground-work of their versification, the peculiar feature which distinguished it from that of the classical ages. The great variety of stanzas in which they indulged must also be remembered. So great, indeed, was the license permitted in this respect, that Rambaut de Vaqueiras, surnamed "*le Bel Cavalier*," has left a poem in six stanzas, each of which is in a different dialect;* the first being in Romance, the second in Tuscan, the third in French, the fourth in Gascon, the fifth in Spanish, and the sixth in a most curious *mélange* of all these idioms. It must also be considered that these poems were framed with the strictest regard to harmony, that they were composed for music, and were expressly adapted to the melodious tones of the harp. It was by this powerful and heart-stirring combination of two of the most powerful of the imitative arts,† of poetical enthusiasm and of musical expression,

Andres, attribute it to an Arabian origin, while Muratori, Tyrwhitt, and the ingenious Hallam, deduce it from the Latin rhythmical verses, which, in the decline of that language, became current among those who were unable to appreciate the true force of syllabic quantity. Is it not possible, however, that rhyme, like chivalry, may have had its origin with the "*barbarous Goths*?" may it not have arisen 'mid the fogs of Iceland and the mists of Scandinavia? We think it may; and doubt not that ere long it will be satisfactorily proved that the "lords of the lion heart and eagle eye," the authors of the *Edda* and the *Nibelungen*, the tribes who first raised the female character to the proud pre-eminence which it now enjoys, were the originators and inventors of that chief beauty of modern poetry—rhyme.

* Compositions of this description, when each stanza was composed separately, and without any stated return of rhyme or equality of metre, were termed *Descorts*, an expression signifying discordance. This style appears to have been adopted by the Troubadours to denote the contending feelings which filled their breasts when their mistress proved unfaithful or unkind: as is the case in the instances which we have cited of Rambaut de Vaqueiras (the same "*bel cavalier*" who the Marquis Malespina charged with highway robbery), who afterwards mentions the infidelity of his mistress, and states that as sufficient reason for the discordance of his poetry. The *acort* was precisely the opposite, and was meant to signify the delights arising from a favoured passion. Thus, Guiraut de Salignac informs us that as long as his mistress proves faithful he will never compose a *descort*, but will occupy himself with *acort*.

" E ja no feira descort
S'ieu acort
Ebon accordansa
Trobes ab lieys, qu'am plus fort."

Raynouard, *Choix des Poesies*, 8vo. tom. iii, p. 396; Diez, *Poesie der Troub.* p. 116.

† On the powerful effects of the union of music and poetry, the reader is referred to the philological works of G. J. Vossius, and more especially to his

that the Troubadours (first fruits of European literature) so rapidly acquired that proud pre-eminence, and that universal admiration, which, like the chords of their own harps, have long since mouldered in the dust, and are hidden 'neath the wreck of ages. Can it, then, for a moment, be imagined that these poems, composed upon the spur of the moment, when inflamed by love or excited by an animated rivalry, will bear to be laid before the searching eye of criticism, and, under all the disadvantages of a halting prose translation, to be perused solely for the purpose of discovering the sentiments and ideas which they contain? As well might we attempt to render interesting in a prose translation the odes of Anacreon, the songs of Alcmanes, or the lyrics of Alcæus. Lyric poetry may be compared to a temple, fair, light, tasteful, yet withal fantastic in its style, the foundations of which are harmony and enthusiasm; divest it of these, its only supports, and the heavy, shapeless mass of ruins which bestrew the ground will, to pursue the metaphor, still bear a strong similarity to the dulness and insipidity of the poetry when, divested of its choicest beauties, it is reduced to the level of languid prose. In order fully to appreciate the compositions of the Troubadours, we must transport ourselves to the age of chivalry; we must conjure up a vision of the days that are past; we must imagine knights, esquires, and pages, collected for the celebration of a solemn tournament,* and, surrounded by imposing pomp and brilliant page-

Institutiones Poeticæ. The treatise by his son Isaac, *De Poematum Cantu et Viribus Rhythmis*, contains a fund of valuable information on the subject, mingled, however, with those wild and imaginative notions which distinguished the author. In perusing the works of the younger Vossius, we must never forget his love for the marvellous, and his prejudices in favour of antiquity. The treatise *De Poematum*, &c. is written solely with the views of extolling the music of the ancients, and depreciating that of modern nations, except the Chinese, for whom he has a most strange predilection. See also Jortin's *Philological Tracts*, Vol. ii, p. 1.

* These military diversions have already been so frequently and so ably discussed, that another detailed account of them might, perhaps, be deemed superfluous and tedious. We cannot, however, let the subject pass without adverting to the difference which existed between the *jousts* and the *tourneys*—chivalric institutions, which, though essentially different, are still very frequently confounded. The former were the direct offspring of the judicial combats, recorded by Tacitus as existing among the northern tribes; in which the accused was permitted to meet his accuser face to face, and in single conflict to maintain his innocence, relying, perhaps, less on the strength of his individual arm, than on those deep-rooted feelings of superstition which led him to believe that "God defends the brave" (*Deos fortioribus adesse*). The *joust* was, in fact, the precursor of the modern duel (a mode of trial

antry, view the knights superbly mounted and caparisoned, each one adorned with the *faveurs** of her to gain whose approving smile he dared every danger, plunge recklessly into the animated conflict. The mimic warfare over, we must transport ourselves to the great hall of the castle, and there—surrounded by all that is lovely, or gallant, or noble, or brave; by all that is calculated to heat the imagination or to inflame the heart—imagine a knight, perhaps already crowned with the laurels of victory, stepping forth, and in a melodious voice, accompanied by his well-tuned harp, proposing a subject for discussion; his rival then advancing, and in a stanza of similar metre answering the question. The verbal contest over, and the decision granted, we may easily imagine the victorious poet receiving from the hands of the fair dispensers of renown, the longed-for wreath of victory. In the tender and vo-

possessing all the barbarism of the northern ordeal, without its religious feelings); the arms used were of an offensive nature; and the combatants seldom separated until one or other had received a mortal wound. The *tournoiement*, on the contrary, was intended merely as a military amusement; in which bodies of knights exercised themselves in mimic warfare, and contended for the approbation of the fair. The arms used, also, were of an inoffensive nature, being generally restricted to headless spears and blunted swords and daggers. In spite, however, of all these precautions, innumerable accidents occurred. Ducange, in his admirable dissertation on the subject, names upwards of twenty nobles of the highest rank who died in them. The evil at length grew to such an extent that the popes thundered forth their anathemas against those who practised them, averred that those who died in them would unavoidably be damned, and even denied them christian burial: "*Et si quis eorum ibi mortuus fuerit, quamvis ei poenitentia non denegetur, Ecclesiasticâ tamen careat sepulturâ.*"—(*Concil. Lateran. A. D. 1179*). The exciting influences of these conflicts were too great to be thus easily dispensed with, and the tournaments were continued with unabated vigour until the year 1559 when Henry II, King of France, received his death-blow in one. From this period they gradually fell into disuse; and their decline was not a little hastened by the invention of gunpowder, which altogether changed the mode of warfare. For detailed accounts of this subject see Ducange, *Glossarium*, voce "*Torneamentum*;" Ducange, *Dissertationes VI et VII à l'Histoire de S. Louis*; Strutt's *Sports and Pastimes*, p. 88; Scott's *Essay on Romance*; and last, though, in point of antiquarian research, not least, his admirable description of the tournament in *Ivanhoe*.

* If the knight happened to lose this valued trifle, his mistress quickly gave him another; and so eagerly did the ladies furnish their favoured lovers with new pledges of their affection, that at the conclusion of the conflict they frequently found themselves nearly destitute of decent covering. From this expression, *faveur*, is derived the bride's *faveurs*.—See S. Palaye, *Mém. sur l'Ancienne Cheval.* tom. i, p. 95.

luptuous strains of the Troubadours, there is a vehemence and an ardour peculiarly their own, which may well defy all attempts at imitation or translation. They are the natural and glowing expressions of the early genius of an imaginative people : too nervous, too simple, and too striking, ever to be duly appreciated by after ages, and too exclusively adapted to music to be criticised from the cold and spiritless relics which, having survived the lapse of ages, are now to be found only in the collections of the curious.

When peace or a truce brought with it a brief repose, the public lists, the crowded tournament, and the applauding fair, all conspired to keep the mind in the same undeviating direction to its favourite object, chivalry. Beneath the azure sky of Provence it was, as we have before seen, that this institution first presented that brilliant pageantry and those varied forms, which, glimmering through the mists of ages, still charm the imagination of the poet and command the attention of the historian. The same congenial soil gave birth, also, to one of the most singular of chivalric institutions, the Courts of Love. The Troubadours, in the discussion of the numerous abstruse questions in which they so much delighted, might naturally be supposed to desire to lay their contentions before some tribunal, to whose final decree both parties might unhesitatingly yield. To supply this want were founded the Courts of Love, in which the fair sex presided, and gravely debated the merits of the arguments which had been pleaded by the contending poets. The fair rulers of these courts did not, however, restrict themselves to the discussion of such abstruse and problematical questions, but, under the pretence of a regard for social improvement, took cognizance of every thing relating to love. Before these tribunals husbands complained of the infidelity of their wives, lovers appealed against the harshness of their mistresses, and ladies depicted the neglect of their lovers, requesting that they might formally be permitted to renounce their devotion ; everything, in short, relating to the tender passion, was discussed with a scholastic and punctilious subtilty that could hardly have been surpassed by the sophistry which distinguished the scholars of the age. These tribunals, which were generally convoked and presided over by some lady distinguished by rank or beauty, consisted of an unlimited number of married ladies, the number varying from ten to forty : the Countess of Champagne, however, presided over one of sixty ladies. In addition, however, to these lady judges, it appears that knights also were admitted, each of whom had his peculiar duty ; and from the great number and quality of these officers it would appear that they were founded

upon the model of the sovereign courts.* The decrees of these courts were guided by a certain code of love,† which was stated to have been found by a Breton knight, while wandering through a thick forest, suspended by a golden chain from a tree. This amatory code, a copy of which was possessed by every tribunal, consisted of thirty-one articles, which inculcated, as may be imagined, a very easy system of morality, or, to speak more correctly, of refined libertinism. In the decisions (or, as they were termed, *arrêts*) of these singular monuments of love, the unblushing familiarity with which the fair ones expressed their amours, and the art with which they discussed the tender passion, is truly surprising; and though

* The only complete list which we have remaining of the offices of the Court of Love, will be found in the *Hist. de l'Acad. des Inscriptions et Belles Lettres*; 500 persons are there named, with the separate office which each occupied. This list has been printed from a manuscript of the end of the 16th century, which was transcribed from the original of, at least, fifty years earlier date. From the names of the numerous historical personages recorded, it has been stated that this court was one held in 1410, by Charles VI. and his Queen Isabella, of Bavaria.—See *Hist. de l'Acad. des Inscriptions. etc.* tom. vii, p. 287; Diez, *Beitrag zur Kenntnis der Römischen Poesie*, p. 93.

† This code has been recorded by André, a chaplain of the Court of France, who has likewise left us a voluminous record of the *arrêts* of the Courts of Love. His work, however, though regarded by Raynouard as a veracious authority, consists of a series of fabulous legends, the foundation of which, however, is truth. Some of these *veracious* records are too palpably absurd to need refutation. Thus, he tells us that “a knight who violated his plighted faith, was whipped with rods at Aix;” and that “burial was denied to a lady who had broken some of the laws of love.” These facts, it is true, have startled Raynouard, who, however, gravely satisfies himself by affirming that these tribunals were fully empowered to execute these decrees, if necessary, by force, otherwise by the laws of honour, which lead a man to risk his life in a duel or to pay his debts of honour. Honour, forsooth, must have been in those days something more than a “mere escutcheon,” if it could thus lead a gallant knight to allow himself to be publicly whipped, or the relations of a lady to permit her to remain disinterred. The absurdity is palpable, as has been amply proved in a small work by the learned Diez, entitled *Beitrag zur Kenntnis der Römischen Poesie*. Berlin, 1825. This writer, perhaps, carries his objections to too great a length, in denying altogether the *existence* of these tribunals; though, in regard to their penal authority, he is undoubtedly correct. M. de Chasteuil, a learned though credulous Frenchman, published in 1701 a work, in which he treats of these courts as possessed of unlimited authority and power. His work was, however, ably refuted by M. de Haitze in 1702, who at some length exposed the visionary theories of Chasteuil. An accurate *précis* of this literary controversy will be found in De Sade, *Mémoires pour la Vie de Petrarque*, tom. ii, p. 44, note.

they sometimes hid a warmer sentiment beneath the more decorous name of friendship, or shrouded it beneath the cloak of Platonic love or disinterested affection, such was the simplicity of manners that, even in the presence of their husbands, they unblushingly dared to give unequivocal marks of the friendship and admiration in which they held their *cavalieri serventi*. This unbridled licentiousness, combined with the foppery which characterized these institutions, tended, perhaps, to hasten their suppression, as we find little mention made of them after the commencement of the fourteenth century. Evil, however, as was the system of these tribunals, the *tensons* which were discussed in them are, perhaps, more valuable than any of the other reliques of the Provençals, as presenting us with a more lively and more natural picture of the manners of the times; they give us, in fact, the only complete view of the institution of chivalry; and in the licentious, yet ingenious, and indecent, yet sincere, expressions which characterize these compositions, we have a faithful picture of that institution, composed as it was of veneration and of grossness, of simplicity and of gorgeousness, of magnanimity and of selfishness; in short, of feelings the most opposite, and of affections the most remote.

In the consideration of the Courts of Love, we must be careful not to confound them with the *Jeux Floréaux*, which were of a totally different nature. These latter sprang up at Toulouse in the decline of Provençal literature, and were one of the numerous efforts then made for its revival. These games were instituted in 1323, under the auspices of seven gentlemen of Toulouse, who, poets themselves, were accustomed to meet for the recitation of their compositions at a retired spot near the city. Wishing to increase their numbers, and at the same time to give publicity to their scheme, they sent round the country circular letters, signed by *La gaie Société des Sept Troubadors*, offering a reward of a golden violet to the author of the poem which should be deemed the best, at the next assembly in May, 1323. This first meeting was numerously attended, and the prize was adjudged to Arnould Vidal, who was immediately created a doctor of the "*gaie science*." These assemblies were continued annually, and were numerously attended; they, however, received greater publicity through the generosity of a poetess, Clemence d'Isaure, who left in her will three other golden flowers, which were added to the original violet. Until the reign of Louis XIV, it had been merely a private institution for the encouragement of poetry; in 1646, however, that monarch took it under his especial patronage, added a golden amaranth to the prizes already offered, and limited

the number of members to thirty-six. The institution is still in existence, its annual festivals being celebrated in May. Its morality, also, has been reformed ; and no composition which treats of an unlawful passion is permitted to be recited.*

CRITES.

* Velly, Villaret et Garnier, *Histoire de France*, tom. viii, p. 139, &c. ; see also Caseneuve, *Origine des Jeux Floréaux*. This latter author, who maintains that these institutions had their rise in Provence, adds, by way of satire on the Germans, to whom he had a great dislike, that "*les Allemands, qui ont toujours été les singes des gentillessees Françaises, en introduiraient chez eux la façon et la coutume.*"—p. 46, &c.

(To be continued).

SKETCHES OF EUROPEAN ORNITHOLOGY.

GOULD'S "BIRDS OF EUROPE."

NINETEENTH PART.

PLATE I. The White Wagtail,—*Motacilla alba*,—Bergeronette grise, *Fr.*,—Cutrettola cinerea, *It.*,—Weisse Bachstelze, *G.*,—Zwijkstraat, *D.* The true *M. alba*, of Linnæus ; common in France and the European continent, Africa, and the high lands of India ; but unknown in Britain : and principally differing from the British species in the absence of the deep-black colouring on the back, by which the latter is characterized. *Food* : Flies, and other Insects and their larvæ ; Millipedes. *Nest* : formed in rocks, bridge-arches, towers, hollow trees. *Eggs* : 6, bluish-white, spotted with black. *Female* : white colour less pure,—black occipital mark less extensive, than in *male*.

PLATE II. Shoveller Duck,—*Rhynchopsis*—olim *Anas*—*chlypeata*,—(*A. rubens*, Gmel.),—Canard Souchet, ou le Rouge, *Fr.*,—Anatra mestolone, *It.*,—Loffelente, *G.* The type of a new genus, instituted, by Leach, on the peculiar configuration of the beak (*ίγχις*, the beak, *ἀσπίς*, a shield) ; and thus characterized : *Beak* long, with base

unarmed, semi-cylindric, lip dilated, spoon-shaped, with small incurved nail. Sides of mandibles with pectinated lamellæ. *Nostrils* medial, oval, basal. *Tail* short, simple, commonly 14-feathered. *Spathulea*, of Fleming. *Food*, of this, the only British species, Insect-larvæ, fresh-water plants. *Nidification*, like that of Common Wild Duck. *Eggs*: 10—12; pale-green. Figures of male and female admirably executed.*

PLATE III. Reed-Wren,—*Salicaria arundinacea*, (*Sylvia*, *Motacilla*, and *Curruca arund.*, respectively, of Latham, Gmelin, and Brisson),—le Bec-fin des Roseaux, ou Efarvatte, *Fr.*—der Rohrsanger, *G.*—het Karraketje, *D.* A British species, migratory; arriving in April: nearly allied to *S. phragmitis*; but distinguishable by larger size, and uniform tint of upper surface. *Food*: aquatic flies and larvæ. *Nest*: upright,† flower-pot-shaped; formed of seed-tops of reeds and long grass, and attached to stems of the former. *Eggs*: 4—5, greenish-white, speckled and blotched with brown and dull-green. *Fig.* Male and Female.

PLATE IV. Natterer's Warbler,—*Sylvia Nattereri*,—Bec-fin Natterer, *Fr.* A new and rare species, discovered, by Natterer of Vienna, in South of Spain, and since met with in South of France, Switzerland, and the Tyrol. *Food*: small Arachnida and Insecta. *Nest*: among grass; spherical: formed externally of dead leaves, with lateral orifice. *Eggs*: 4—5, globular, white, dotted with pale-red. *Fig.* One male.

PLATE V. The Sanderling,—*Arrenaria Calidris*, olim *Calid.*,—*Tringa arrenaria*,—le Sanderling variable, *Fr.*,—der gemeine Strandläufer, graue Sonderling, *G.*,—Grijze Zandplevier, *D.* An autumnal migrant from the Arctic regions; arriving about August or September. *Food*: Coleoptera, and marine insects. *Nidification* unknown. *Fig.* two birds in summer- and winter- plumage.

PLATE VI. Tree-Pipit,—*Anthus arboreus*,—le Pipit des Buissons, *Fr.*,—der Baumpieper, *G.* A British species, nearly resembling *A. pratensis*; but distinguishable by its *short* and *curved hind-claw*, and migratory habits. Arrives in early spring. *Food*: insects

* Having exhausted all our scanty stock of laudatory epithets in the analysis of the preceding parts of Mr. Gould's work, we shall, henceforth, observe an economical silence in our descriptions, except when we have some glaring defect to notice, or some important error to expose.—P.

† The nest and egg of this species are beautifully and correctly figured by Schinz, in his admirable *Beschreibung und Abbildung der künstlichen Nester und Eyer der Vögel*: 4to. Zurich, 1830.

and their larvæ. *Nest*: constructed amid long herbage or low bushes, of moss, fibrous roots, and withered grasses. *Eggs*: 4—5, greyish-white, speckled with brownish-purple. Sexes alike. *Fig.* one adult male.

PLATE VII. Ruddy Sheldrake,—*Tadorna rutila* (*Anas Casarka*, Linn.),—le Canard Kasarka, *Fr.*,—die gelbrothe Ente, *G.* A rare European and still rarer British species, provisionally placed under *Tadorna*; but destined, we sagely predict, ere long, to constitute, with *Anas tadornoides*, a new genus, *Casarka*? One specimen only yet killed in Britain. *Food*: grasses, aquatic Insects and larvæ, Breeds on borders of large rivers. *Eggs*: 8—10, white. Female distinguished from male by absence of black collar; less brilliant colouring of plumage; and grey speckling of back. *Fig.* adult male.

PLATE VIII. Brake Locustelle (Grasshopper Lark and Warbler, of olden time),—*Locustella avicula*,—le Bec-fin locustelle, *Fr.*,—Henschreckensanger, *G.* A common British species, especially in the south. *Food*: small Mollusca, Insects. *Nest*: concealed among brambles or furze; formed of moss and dried stems of *Galium*. *Eggs*: 4—5, pinkish-grey, with numerous specks of deeper tint. *Fig.* male and female: dark spots on throat of *former*, most conspicuously marked.

PLATE IX. Cinereous Shearwater,—*Puffinus cinereus*,—le Petrel Puffin, *Fr.*,—der Wasserscherer, *G.* A species lately transferred from *Procellaria*; widely diffused over Europe; but rare in Britain. *P. fuliginosus*, of Strickland, probably only a young bird of present subject. *Food*, and *habits*: those of *P. Anglorum*. *Nidification* unknown. *Fig.* two adult birds.

PLATE X. Purple Sandpiper,—*Tringa maritima*,—le Becasseau violet, *Fr.*,—Migratory. Winter-visitant in Britain, October—April. Distinguished from congeners by rich-violet tint of plumage, deeper in summer. *Food*: small testaceous Mollusca, Crustacea, marine plants. *Nidification* unknown. *Fig.* an adult male.

PLATE XI. Sky-Lark,—*Alauda arvensis*,—l'Alouette des champs, *Fr.*,—Allodola, *It.*,—die gemeine oder Feld-Lerche, *G.*,—de gemeene Leeurik, *D.* *Food*: grain, Insects. *Nest*: on the ground. *Eggs*: 4—5, greyish, spotted with brown. *Fig.* an adult male, and young bird.

PLATE XII. Common Cuckoo,—*Cuculus canorus*,—le Coucou gris, *Fr.*,—Cucule canerino, *It.*,—Asch-grauer oder gemeiner Kukuk, *G.*,—de Koekoek, *D.* A bird too well known to require description. The adult bird quits Britain on its migration southward,

in August; the young, in September. In genial springs, we have been accustomed to hear the welcome voice of the male about April 18th. *Fig.* an adult, and young bird.

PLATE XIII. Nightingale,—*Philomela luscinia*,—le Rossignol, *Fr.*,—il Russignuolo, *It.*,—die Nachtgal, *G.*,—Nachtgael, *D.*—See Mr. Blyth's Papers, in Nos. 15, and 16, of *The Analyst*. *Fig.* one male, rather too highly coloured.

PLATE XIV. Great Egret,—*Ardea alba*,—le Héron Aigrette, ou blanc, *Fr.*,—la Garza bianca, *It.*,—der weisse Silberreiher, *G.*,—de witte Reiger, *D.* A beautiful specimen, common in southern and eastern, rare in central and north Europe. The long, hair-like feathers, which spring from the back, and are susceptible of erection and depression at will, appear in Spring, and are lost in Autumn. *Food*, and *habits*, like those of *A. cinerea*. *Nest*: arboreal. *Eggs*: 4—6, bluish-white. *Fig.* an adult male. Temminck has confounded this bird with *A. Egretta*, a distinct American species.

PLATE XV. Common Creeper,—*Certhia familiaris*,—le Grimpeur, *Fr.*,—il Picchio passerino, *It.*,—der gemeine Baumläufer, *G.*,—gemeen of europisch Boomkruipertje, *D.* The only European species of the genus; permanently resident in Britain. An expert tree-climber: cry, resembling that of *Regulus auricapillus*. Insectivorous. *Nest*: of grass and mosses, in holes of trees. *Eggs*: 7—9, white, speckled with reddish-brown. *Fig.* an adult.

PLATE XVI.—Bewick's Swan,—*Cygnus Bewickii*,—le Cygne de Bewick, *Fr.* This newly-discovered species of wild swan differs from the Hooper in its smaller size, and the colouring of the beak, which is black at point, and orange-yellow at base, in *male* bird, and lemon-yellow in *female*. For the distinguishing characters of internal structure, we must refer to Yarrell's paper in *Linnean Transactions*. *Food*: like that of congener. *Nest*: of moss-peat; 6 feet long, 4½ wide, 2 deep, and 1½ in diameter of cavity. *Eggs*: brownish-white, clouded with a darker tint. *Fig.* an adult male.

PLATE XVII. Wood-Lark,—*Alauda arborea*,—l'Alouette lulu, *Fr.*,—la Lodola degli alberi, *It.*,—die Baum- oder Waldlerche, *G.*,—Boomleerik, *D.* Migratory to and from Britain, April—October. *Food*: Insects, oily seeds. *Nest*: terrestrial; beneath herbaceous tuft or shrub. *Eggs*: 4—5, grey, spotted with brown. *Fig.* an adult male.

PLATE XVIII. Scaup Pochard,—*Fuligula*—olim *Anas*—marila, —le Canard mailouinan, *Fr.*,—die Berg-Ente, *G.*,—Berg-eeend, Topper of Velt Duiker, *D.* Native residence, and scene of *nidification*,

the Arctic regions. Migrates to Europe, on approach of winter. *Food*: fishes, Mollusca, and marine plants, obtained by diving. *Female*, differing so much, in plumage, from *male*, and moreover marked with a broad white band at base of bill, as to have been described as a distinct species, *A. franata*. *Fig.* an adult male, and female.

PLATE XIX. Crested Lark,—*Alauda cristata*,—l'Alouette à hanssecol noir, *Fr.* (*A. cochevis*, of Temminck),—la Capellugola, *It.*,—die Haubenlerche, *G.*,—Gekuijfe Leeurik, *D.* Common in South-Europe: rarely occurring northward. *Female* distinguished, from *male*, by smaller size, and shorter crest. *Food*, and *nest*: resembling those of *A. arvensis*. *Eggs*: 4—5, pale ashy-brown, with dark-brown spots. *Fig.* adult male, and female.

PLATE XX. Garden-Warbler,—*Curruca hortensis*,—le Bec-fin fauvette, *Fr.*,—Beccafico cenerino, *It.*,—graue Grasmücke, *G.*,—Braemsluiper, *D.* Migratory: arriving in Britain, during April. Little inferior to Nightingale and Blackcap, in song. *Nest*: amid nettles and rank herbage, formed of roots, grasses, and moss. *Eggs*: 4—5, yellowish-grey, blotched with wood-brown.

TWENTIETH PART.

PLATE I. Red-collared Goatsucker,—*Caprimulgus ruficollis*,—l'Engoulevent à collier roux, *Fr.* A new species of *Caprimulgus*; killed, by Natterer, in south of Spain, where it is termed *Samala*. Imperial Cabinet of Vienna alone possesses specimens. Africa is supposed to constitute its native habitation. *Fig.* an adult male.

PLATE II. Black-winged Kite,—*Elanus melanopterus*,—l'Elanion blanc, *Fr.* A beautiful species; widely diffused over all the warm and temperate portions of the old continent. *Food*: birds, reptiles, amphibia, and insects captured on the wing. *Nidification*: apparently unknown. *Fig.* an adult, and young bird.

PLATE III. Bonelli's Eagle,—*Aquila Bonelli*,—l'Aigle Bonelli, *Fr.* A noble species; first described by Temminck, as an occasional visitant of Europe. *Fig.* an adult male, superbly coloured.

PLATE IV. Siberian Thrush,—*Turdus Sibericus*,—le Merle à sourcils blancs, *Fr.* A rare species, first described by Pallas; and supposed to connect the members of *Petrocincla* with those of *Turdus* genus. *Male* distinguished from *female*, of both of which *figures* are given, by broad white streak above the eye. *Nidification*: not mentioned.

PLATE V. Olive-tree Salicaria,—*S. olivestorum*. A new species; discovered by Strickland, three years ago, in Zante, one of the Ionian islands. It belongs to that division of the *Salicaria*, in which the tail is but slightly rounded, and the colouring sombre and uniform. Probably destined to form, with other nearly-allied species, a new genus. *Nidification*: not mentioned. One figure.

PLATE VI. Iceland Gull,—*Larus islandicus* vel *glaucoides*,—la Mouette d'Icelande, *Fr.* A beautiful species; occurring more frequently than supposed, on the shores of Britain. Not described in the first two volumes of Temminck. *Food*: fishes, whale-flesh, and carrion. *Fig.* an adult male.

PLATE VII. White-winged Wagtail,—*Motacilla lugubris*,—why not *leucoptera*?—la Bergeronnette lugubre, *Fr.* A species common in the Crimea, Hungary, Italy, and south of France; and clearly distinguishable from the British *Pied*, and continental *White* congeners, by its superiority of size, *white wing*, and black mark extending between bill and eye. Resembles, in *food*, and *habits*, the other members of the Family. *Fig.* two, in summer- and winter- plumage.

PLATE VIII. Purple Heron,—*Ardea purpurea*,—l'Héron pourpre, *Fr.*,—Scarza granocchia, *It.*,—der Purperreiher, *G.*,—Purpere Reiher, *D.* Diffused over the whole of Europe, Asia, and Africa; and especially abundant in Holland, and the low marshy districts of France. Merely an accidental visitant of the British shores. *Food*: mice, fishes, frogs, insects. *Nest*: formed on the ground among herbage. *Eggs*: 3, pale bluish-green. *Fig.* adult male.

PLATE IX. Pallas' Water-Ouzel,—*Cinclus Pallasii*,—la Cincle de Pallas, *Fr.* An occasional visitant of the eastern confines of Europe; noticed, by Temminck, in Part III, of *Manuel d'Ornithologie*, and closely resembling our *C. aquaticus*. *Habits*, and *nidification*, unknown. *Fig.* an adult, and young bird.

PLATE X. Marsh Warbler,—*Salicaria*—*Sylvia*—*palustris*,—le Bec-fin verderolle, *Fr.*,—der Sumpfsanger, *G.* Nearly allied, in figure and habits, to *S. arundinacea*; but distinguishable by larger bill, yellow lining of mouth, and greener tint of plumage. Gifted, also, with great variety of song and powers of imitation. Common in central Europe, Germany, Holland. *Food*: Insects, berries. *Nest*: spherical; formed, on ground, among roots of willows, reeds, and bushes. *Eggs*: 4—5, clear-ash, spotted with bluish-ash. *Fig.* one adult.

PLATE XI. Lead-coloured Falcon,—*Falco concolor*,—le Faucon concolore, *Fr.* Native of North-Africa, and occasional visitant of

Europe; resembling, in general economy, our Hobby. *Habits* unknown. *Fig.* an adult male?

PLATE XII. American Bittern,—*Botaurus lentiginosus* (*Ardea lentiginosa*, Montagu),—le Butor de l'Amérique, *Fr.* A native of America; occasionally visiting Britain, and closely resembling our *B. stellaris*. Described, and figured, in *Supplement* to Montagu's *Ornithological Dictionary*. *Food*: Amphibia, fishes. *Nest*: among the tall grass of swamps. *Eggs*: 4, cinereous-green. *Fig.* one adult bird.

PLATE XIII. Toupet Tit,—*Parus bicolor*,—le Mésange bicolore, *Fr.* Native of America; but occasional visitant of Russia. Resembling, in manners, the more strictly European members of the Family. *Nest*: formed of warm materials, in holes prepared by different Woodpeckers, or made by the bird itself. *Eggs*: 6—8, pure-white, sparingly spotted with red at larger end. *Fig.* an adult.

PLATE XIV. Rufous-backed Egret,—*Ardea russata*,—l'Héron roussâtre, *Fr.* A native of southern and eastern Europe; occasionally captured in Britain. Described by Montagu, in *Linnean Transactions*, vol. ix, and in *Ornithological Dictionary*, as little White Heron. *Food*: frogs, fishes, insects. *Nidification*: unknown. *Fig.* an adult, distinguished from young bird by the fine rufous tint of the plumage.

PLATE XV. Red-chested Dottrel,—*Charadrius pyrrhrothorax*. *Fig.* of an adult and young bird; transmitted, by Temminck, as an European species, without information respecting its habits.

PLATE XVI. Slender-billed Curlew,—*Numenius tenuirostris*.—A native of South-Europe; discovered by Prof. Savi: and distinguishable from Common Curlew and Whimbrel, by size of bill, and distinct spotting of breast. *Habits* unknown.

PLATE XVII. Rufous Swallow,—*Hirundo rufula*,—l'Hirondelle rousseline, *Fr.* Native of south and west Africa, and occasional wanderer from its northern shores to South-Europe. Familiar with man; frequently building in sleeping-room of his habitation. *Insectivorous*. *Nest*: a hollow ball, with elongated tubular entrance. *Eggs*: 4—6, white, with small brown spots. *Fig.* adult male.

PLATE XVIII. Numidian Demoiselle,—*Anthropoides virgo*,—la Grue demoiselle, *Fr.* An occasional migrant from Africa, its native habitation, to Europe. Dispersed, also, over India. *Food*: lizards, small fishes, snails, aquatic insects. *Nidification*: unknown. *Fig.* an adult male.

PLATE XIX. Short-toed Ptarmigan,—*Lagopus olim Tetrax*—

brachydactylus,—le Tétrás à doigts courts, *Fr.* A new and well-defined species; obtained from north Europe: distinguished from *L. saliceti*, in having nostrils and bill almost concealed by feathers; tarsi shorter, and thickly feathered; and shafts of primaries, and toe-nails, pure-white. *Habits* unknown. *Fig.* an adult in winter-plumage, white, with exception of bill and tail-feathers, which are black; and bare skin above the eye,—scarlet. Summer-plumage described as rich chestnut-brown.

PLATE XX. Winter-Finch,—*Fringilla hyemalis*,—le Bruant Jacobin, *Fr.* A summer-migrant to the Arctic regions: common in Greenland and Iceland. Tame, gentle, and resembling, in habits, the common Sparrow. *Granivorous*. *Nidification* unknown. *Fig.* an adult male, and female.

TWENTY-FIRST PART.

PLATE I. White's Thrush,—*Turdus Whitei*,—le Merle de White, *Fr.* A new species of European thrush; one specimen of which has been killed in Britain: provisionally placed under *Turdus*; but probably destined to constitute, with *Turdus varius*, of Horsfield, and another from New South Wales, a well-marked and distinct group among the *Merulidæ*. From these species, it differs, principally, in greater length of wing. *Fig.* one adult bird.

PLATE II. Black Grouse,—*Tetrao tetrix*,—le Tétrás birkhan, *Fr.*,—Gallo di monte, Fasiano negro, *It.*,—Gabelschwanziges Waldhuhn, das Birkhuhn, Kleiner Auerhahn, *G.*,—Kor- of Berkhoen, *D.* A well-known European and British bird. *Food*: Insects, seeds, and grain, the buds and shoots of different trees, especially the Fir-tribe. *Nest*: of a few dried stems of grass, formed, commonly on marshy ground, beneath the shelter of tall tuft or low bush. *Eggs*: 6—10, yellowish-grey, blotched with reddish-brown. *Fig.* adult Male, and Female.

PLATE III. Migratory Ouzel,—*Merula migratoria*,—le Merle erratique, *Fr.* This beautiful thrush, the *Robin* of America, occasionally migrates from that Continent to Europe; and has been killed in Germany, and near Vienna. It belongs to the Section of the *Merulidæ* which includes our common Blackbird; and closely resembles that species in its habits, *Nidification*, and song. Animated descriptions of it occur in the works of Wilson, Audubon, and Richardson. *Fig.* an adult bird.

PLATE IV. Mountain Accentor,—*A. montanellus*,—l'Accenteur

montagnard, *Fr.* Of this bird, Mr. Gould, after visiting almost all the continental Collections, has met with but one specimen, killed in Austria, 1790. He had previously regarded it as a mere variety of *A. modularis*; from which, however, it is readily distinguished by a conspicuous stripe of buff over the eye, and the general tawny hue of the under-surface. *Nidification* unknown. *Fig.* one Adult.

PLATE V. Egyptian Goose,—*Chenalopex Egyptiaca* (probably *χρηλάτης*, of the ancient Greeks),—l'Oie d'Egypte, *Fr.* An African member of the Goose-Family; occasionally visiting South Europe, particularly the island of Sicily; and now domesticated in Britain. Sexes alike in plumage; but *female* smaller, and less distinctly coloured, than *male*; of which an adult is *figured*.

PLATE VI. Pallid Thrush,—*Turdus pallidus*,—le Merle blafard, *Fr.* Native of Asia; widely diffused over Siberia, and occasionally visiting central regions of Europe. First described by Pallas. Probably resembling in *food*, habits, and *nidification*, other members of the Family. *Fig.* Two adults in different states of plumage.

PLATE VII. Asiatic Nuthatch,—*Sitta Asiatica*. A specimen, from Temminck's Cabinet; taken in Russia. Smaller, and lighter in general ground of colouring, than *S. europæa*. *Nidification*, and habits, unknown. *Fig.* an adult.

PLATE VIII. Rock Ptarmigan. A specimen from Lord Derby's Collection; supposed, by some, identical with American, *L. rupestris*; by others, to be merely the female of *L. mutus* in her orange-coloured spring- and summer- plumage. One *figure*.

PLATE IX. Northern Puffin,—*Mormon glacialis*,—le Macareux glacial, *Fr.* A native of the Arctic circle; occasionally visiting north Europe. Distinguished from its congener, *M. fratercula*, by larger, more powerful, and uniformly orange-coloured bill, and greater length of fleshy appendages above the eyes. *Nidification*: unknown. *Fig.* an adult male.

PLATE X. Common Partridge,—*Perdix cinerea* (olim *Tetrao perdix*),—le Perdrix grise, *Fr.*,—Pernice, *It.*,—Gemeines oder graues Feld, Reb- Waldhuhn, *G.*,—Patrys, *D.* *Fig.* adult male and female: too large; rather clumsily drawn, and not very softly coloured.

PLATE XI. Silky Warbler,—*Salicaria*—*Sylvia*—*sericea*,—le Becfin soyeux, *Fr.* A new species; discovered, by Natterer, in South Europe: nearly allied to *S. Cetti*; and probably constituting, with it, a minor division among "les Riverains," of Temminck. These species differ from true *Salicaria*, in total absence of stiff hairs at base of

bill; more rounded form of head and wing; and thicker and more silky plumage. Habits, and *nidification*, of our present subject, unknown. *Fig.* an adult male.

PLATE XII. Common Pheasant,—*Phasianus Colchicus*,—le Faisan vulgaire, *Fr.*,—Fagiano commune, *It.*,—der gemeine Fasan, *G.*—Fasant, *D.* *Figures* of an adult male and female, correctly drawn, but, especially as regards the *former*, rather heavily coloured. "The Pheasant has derived its designations, generic and specific, from *Phasis*, a river of *Colchis*, the modern Mingrelia; whence this valuable was first brought into Europe, by the Argonauts, on their return from the celebrated expedition into Asia."

PLATE XIII. Whimbrel,—*Numenius phaeopus*,—le Courlis corlieu, *Fr.*,—il picciolo Chiurlo, Ch. minore, *It.*,—der Regenvogel, mittlerer Brachvogel, *G.*,—de kleine of Regenwulp, *D.* A species (*Scolopax phaeopus*, Gmel.), widely diffused over the old continent; and a winter-visitant of its more temperate regions. Breeds within the Arctic circle; sometimes, according to Fleming, in the Shetland isles. Principally distinguished from Curlew, by inferiority of size. *Food*: insects, worms. *Nest*: formed on exposed heath and moorlands. *Eggs*: 4, olive-brown, spotted and blotched with darker reddish-brown. *Fig.* an adult,

PLATE XIV. Desmarest's Cormorant,—*Phalacrocorax Desmaresti*,—le Cormoran de Desmarest, *Fr.* A native of Shores of Black Sea, and its tributary streams. Resembles, in size, appearance, and habits, the common Shag; but distinguished by greater length of wing, and longer and more attenuated bill. *Fig.* an adult.

PLATE XV. Black-bellied Water-Ouzel,—*Cinclus melanogaster*,—la Cincle à ventre noir, *Fr.* So specifically designated by Brehm; but regarded, by Temminck and Gould, as probably a mere variety, dependent on climate or situation, of *C. aquaticus*; than which it is smaller, and more deeply coloured above and below. *Food*: insects and their larvæ. *Fig.* an adult.

PLATE XVI. Sabine's Gull,—*Xema Sabini*,—la Mouette de Sabine, *Fr.* An Arctic species. Two specimens recorded, in No. 5 of *Magazine of Zoology and Botany*, as recently killed in the bays of Belfast, and Dublin. An admirable description of it, *Larus Sabini*, given by Dr. Richardson, p. 428 of *Fauna Boreali-Americana*. *Fig.* an adult male in summer-plumage.

PLATE XVII. Willow Locustelle,—*Locustella*—*Sylvia*—*luscinoides*,—le Bec-fin des saules, *Fr.* A new species, very limited in its range; discovered, by Savi, in South Europe. Arrives in Tuscany about

middle of April ; and frequents willows, and reeds of marshy districts. *Food*: insects and their larvæ. *Nidification*, and winter-retreat,—probably Africa,—yet unknown. *Fig.* an adult.

PLATE XVIII. Noddy Tern,—*Sterna stolidus*,—le Mouette brun, ou le Fou, *Fr.* Of this bird, common in America, two specimens, the first observed in Europe, were killed, in 1830, off the Irish coast, near Wexford. *Food*: small fishes taken in *skimming along the water's surface*. *Nest*: of twigs and dried grass, built in bushes and low trees. *Eggs*: 3, reddish-yellow; patched, and spotted, with dull-red and purple; said to be deposited on shelves of rocks in Bahama Islands. *Fig.* an adult.

PLATE XIX. Bifasciated Lark,—*Certhilauda—Alauda—bifasciata*,—l'Alouette bifasciée, *Fr.* Described by Temminck, in 3rd Part of his *Manuel*, as an occasional visitant of eastern and southern Europe. Common on banks of the Nile, and in Abyssinia. Differs from *Alauda* genus in curved and elongated figure of the bill, and comparative shortness of toes and nails. *Food*, and *Nidification*, unknown. *Fig.* an adult Male.

PLATE XX. Common Gull,—*Larus canus*,—la Mouette à pieds bleus, *Fr.*,—Gabbiano mezza mosca, *G. minore*, *It.*,—die kleine graue oder Sturm-Mewe, *G.*,—Gryse Meeuw, *D.* Common on the British coasts; resident there; breeding on rocky headlands, islands, and shores of lakes. Sometimes wanders inland, and, rook-like, follows the plough, in small flocks, searching for worms and insects. *Nest*: formed of sea-weed and grasses. *Eggs*: 2—3, yellowish-white, blotched with brown and grey. *Fig.* an adult, and young bird.

TWENTY-SECOND PART.

PLATE I. Imperial Eagle,—*Aquila imperialis*,—l'Aigle impérial, *Fr.*,—der Königsadler, *G.* A noble bird, native of Eastern Europe; more limited in range, than its congener, *A. chrysaetos*, which it closely resembles in figure and habits: but at once distinguished, in adult age, by the large white marks situated on the scapularies. Resides, principally, in extensive mountainous forests; *feeds* on Mammifera and large birds; and forms its *nest* on mountain-trees or high rocks. *Eggs*: 2—3, dull-white. Temminck describes "the trachea as composed of solid and almost contiguous rings, and forming an annular ossification at the lower larynx; and the bronchi as having broad rings, which gradually lessen in diameter as they approach the lungs." *Fig.* an adult, and young bird.

PLATE II. Pallid Harrier,—*Circus pallidus*. A fine species met with on the banks of the Rhine; probably common in Spain; and heretofore confounded with *C. cyaneus*: from which it differs in occiput of *male* not being white, spotted with pale-brown; in absence of dusky streaks on breast; in the rump and upper tail-coverts being white, barred with brown-ash; and in having seven bars, instead of four, on the under-tail. Plumage of *female* two shades lighter than that of female of *C. cyaneus*; tail marked with six broad fuscous bars, instead of four, and tail-feathers much more pointed. The remains of six lizards were found in the stomach of an individual. *Nidification*: unknown. *Fig.* an adult.

PLATE III. Lesbian Bunting,—*Emberiza Lesbia*,—le Bruant de Mitilène, *Fr.* A rare but widely-diffused species; inhabiting the eastern parts of South Europe, Greece, Italy, Provence. Habits resembling those of other members of the Family. *Fig.* an adult male, and female.

PLATE IV. Yellow Willow-Wren,—*Sylvia icterina*,—la Bec-fin ictérine, *Fr.* A continental species; inhabiting Italy, France, Holland; distinguishable from *S. trochilus*, and *rufa*, by forked tail an inch longer than the wings, and "comparative length of quills and tarsi:" from the *former*, again, by its longer bill;—from the *latter*, by a somewhat shorter wing. *Food*: arboreal insects. *Nidification*: unknown. *Fig.* an adult.

PLATE V. Velvet Scoter,—*Oidemia*—*Anas fusca*,—la grande ou double Macreuse, *Fr.*,—la doppia Velia, *It.*,—die braune Ente, rustfarbige See-Ente, *G.*,—bruine Zee-Eend, *D.* Largest species of genus; distinguished from *O. perspicillata*, and *nigra*, by snow-white bar across wing; patch of white beneath eye; and more dilated bill, with slighter traces of the swollen tubercle. A winter-migrant from the Arctic circle. *Food*: Mollusca, obtained by diving. *Nest*: of grass, lined with down, on the banks of large rivers. *Eggs*: 8—10, white. *Fig.* adult male.

PLATE VI. Red-throated Pipit,—*Anthus rufo-gularis*,—le Pipit à gorge roux, *Fr.* Native of India and Africa; sometimes visiting Europe. Differs from our common Pipit, and all other known species of the group, in *rufous-brown colour of throat*, frequently extending to chest and abdomen. *Supposed* to resemble them in *food*, habits, and *nidification*. *Fig.* adult male, and female.

PLATE VII. Brunnich's Guillemot,—*Uria Brunnichii*,—le Guillemot à gros bec, *Fr.* An inhabitant of northern regions; and probable visitant of British shores. Heretofore confounded with *U.*

troile; but distinguished by more stout and abbreviated figure of bill, and much shorter distance from its tip to the nasal orifices. Habits the same. *Fig.* an adult.

PLATE VIII. Keptuschka Lapwing,—*Vanellus Keptuschka*,—le Vanneau Keptuschka, *Fr.* A rare species from eastern Europe; inhabiting, also, Persia, Asia Minor, and Siberia; and believed, by Dr. Wagler, to be identical with *V. gregarius*. Closely allied to *V. cristata*: yet thought “sufficiently distinct from the typical form of the genus, to constitute a separate group.” *Fig.* an adult male, and young bird.

PLATE IX. Great Eastern Horned Owl,—*Bubo Ascalaphus*,—le Hibou Ascalaphus, *Fr.* A magnificent species; inhabiting southern and eastern Europe; and apparently representing, in the temperate regions of Asia and Africa, *B. maximus*, of the north. Habits, and *nidification*, unknown. *Fig.* an adult male, splendidly executed.

PLATE X. Dusky Shearwater,—*Puffinus obscurus*,—le Pétrel obscur, *Fr.* Distinguished only, by inferiority of size, from, and believed to resemble in habits, *P. Anglorum*; but frequenting the southern, while the *latter* is “almost exclusively confined” to northern seas. No differences of plumage, dependent on sex or age. *Fig.* an adult.

PLATE XI. Black-winged Gull,—*Xema*—*Larus*—*atricilla*,—le Mouette à ailes noires, *Fr.* Not the *L. atricilla* of Temminck,—*Zema ridibunda*, of modern Ornithologists; but an American bird; one specimen only of which has, hitherto, been taken in Britain. Habits, and *food*, those of its congeners. Frequents marshes and newly-ploughed fields, in search for worms and insects. *Nest*: formed in marshes near the coast. *Eggs*: 3, dull-clay colour, thinly and irregularly blotched with pale purplish-brown. *Fig.* an adult bird.

PLATE XII. Semi-palmated Sandpiper,—*Totanus semi-palmatus*,—le Chévalier semi-palmé, *Fr.* An inhabitant of North America; described by Wilson,—see *American Ornithology*, by Jardine, vol. ii, p. 319,—under the name of *Willet*: so termed from its peculiar cry: toes, as the specific designation indicates, *half-webbed*. *Food*: the inhabitants of bivalve shells, aquatic insects, and marine worms. *Nest*: of wet rushes and coarse grass, among herbage of salt-marshes. *Eggs*: 4, very thick at greater end, and tapering to a narrow point at smaller: dark dingy-olive, blotched with blackish-brown: and, during incubation, resting, nearly upright, on the smaller extremity. *Fig.* two adult birds, in summer- and winter- plumage.

PLATE XIII. Snow-Goose,—*Anser hyperboreus*,—l'Oie hyper-

borée, ou de neige, *Fr.*,—die nordische Schneegans, *G.*,—nordsche Sneuwgans, *D.* This fine bird,—*Anas hyperborea*, of olden time, —a native of polar regions, migrates, in winter, to eastern Europe; and occurs in Austria and Prussia. Common, also, in Hudson's bay. *Food*: generally, insects, rushes, roots of reeds and other marsh-plants, torn up, in hog-fashion, by its strong and serrated bill: in Autumn, berries, especially those of *Empetrum nigrum*. *Eggs*: white, regularly ovate; larger than those of Eider Duck. *Fig.* an adult.

PLATE XIV. Creeping Locustelle,—*Locustella*—*Sylvia*—*certhiola*,—le Bec-fin trapu, *Fr.* A very rare bird; first described by Pallas; and distinguishable from the other two species of the genus, by larger size and greyish-white termination of the tail-feathers. Occurs in South-Russia. Habits, and *nidification*, unknown. *Fig.* two of adult bird.

PLATE XV. Bridled Guillemot,—*Uria lacrymans*,—le Guillemot bridé, *Fr.* Considered, by Temminck and the French naturalists, as a distinct species; but commonly associating with *U. troile*; and differing from it, only, in the white line which, encircling the eye, passes down the side of the head. *Fig.* an adult.

PLATE XVI. Rosy Grosbeak,—*Erythropsiza rosea*,—le Bouvreuil Pallas, *Fr.* A native of the northern regions of the old Continent; but occasionally visiting Hungary and central Europe. Differs from *Fringilla purpurea*, of Wilson, and *E. erythrina*, in its longer and less laterally swollen bill. *Fig.* an adult male. *Female*, at present, unknown.

PLATE XVII. Rock or Shore-Pipit,—*Anthus aquaticus*,—le Pipit spioncelle, *Fr.*,—Pispolada spioncella, *It.*,—der Wasser-Piper, *G.* Heretofore known under the various names of *Alauda petrosa*,—*obscura*, and Dusky Lark. Permanent in the British islands; inhabiting rocky and elevated portions of the coast, during summer;—in autumn and winter, muddy sea-shores. Resembles, in call-note and song, the common Pipit; but distinguishable by larger size, and more obscure and dusky colouring of plumage. *Food*: marine insects and worms. *Nest*: formed in clefts and ledges of rocks, of marine grasses, lined with hair and fine vegetable substances. *Eggs*: 4—5, light yellowish-grey, with reddish-brown specks over larger end and sometimes whole surface. Mr. Gould suspects the existence of two species of Rock-Pipit: the British never exhibiting the uniform vinous tint which pervades the breast of continental specimens. *Fig.* an adult.

PLATE XVIII. White Crane,—*Grus leucogeranus*,—la Grue leucogerane, *Fr.* A rare and splendid species, "lately added to the European Fauna:" its native habitation, the northern and central parts of India; and, at present, seen only in eastern Europe. Distinguishable from common species, by larger size, snow-white plumage, and longer bill. *Food*: frogs, ova of fishes, snails, Crustacea, and bulbous roots. *Fig.* an adult.

PLATE XIX. Schinz's Sandpiper,—*Tringa Schinzii*. This is the species so designated by Buonaparte,—not *T. Schinzii*, of Brehm, which, on examination of specimens transmitted by that naturalist himself, Gould believes to be merely a smaller variety of *T. variabilis*. One specimen alone of the American bird, an accidental straggler, has yet been killed in Britain. Voice resembling, but more feeble than, that of Dunlin. *Eggs*: 4, smaller than those of congener, just mentioned; yellowish-grey, spotted with olive- or chestnut-brown. *Fig.* two, adult.

PLATE XX. Spur-winged Plover,—*Pluvianus*—olim *Charadrius spinosus*,—le Pluvier armé, *Fr.* An Asiatic and African species; inhabiting Russia, and occasionally visiting south and eastern parts of Europe. Distinguished from congeners, by *spurred wing*. *Nidification*: unknown. *Fig.* an adult male.

PLATE XXI. American Cuckoo,—*Coccyzus Americanus*,—le Coucou cendrellard, *Fr.* An occasional visitant of British islands. Four specimens only yet captured here: and first account of it given in *Field-Naturalists's Magazine*. Following, the generic characters of this interesting member of the Cuckoo-Family: Bill, of moderate length, strong, arched; culmen convex, base compressed. Nostrils basal, elongated. Wings short. Tail long, cuneiform. Tarsus and middle toe long and equal. In America, from the resemblance of its note to "cow," it has acquired the popular designation of *Cow-bird*;—in some states, *Rain-crow*, from becoming especially vociferous before rain. Unlike its European congener, the Cow-bird constructs a *nest*, which is flat, simple, formed of a few dry sticks and grasses, much like that of common Dove; and assiduously rears its young. *Eggs*: 4—5, elongated oval, bright-green. Occasionally, however, the strong family-propensity to theft and fraud breaks out; exhibited in the abstraction of the eggs from, or deposition of its own in, the nests of other birds. *Fig.* an adult.

PLATE XXII. Swallow-tailed Kite,—*Nauclerus furcatus*,—la Milan de la Caroline, *Fr.* A native American; two specimens only yet killed in Britain. Fully described by Wilson, Audubon, and

Nuttall. Flight, exceedingly smooth and graceful. *Nest*: formed, in the summit of lofty oak or pine, of sticks, with moss and grass, and lined with feathers. *Eggs*: 4—6, greenish-white, irregularly blotched with dark-brown at larger end. *Food*: lizards, snakes, insects and their larvæ. *Fig.* an adult, superbly executed.

PLATE XXIII. Audouin's Gull,—*Larus Audouinii*,—la Monette d'Audouin, *Fr.* A supposed native of northern and western coasts of Africa. Occurs in Mediterranean. Distinguished from the species of genus, *Xema*, by situation of nostrils, and absence of black head in Summer. *Fig.* an adult male, in summer-plumage.

PLATE XXIV. Vinous Grosbeak,—*Pyrrhula githaginea*, Temm.,—le Bouvreuil githagine, *Fr.* A native of northern and central Africa, Nubia, and Syria; occasionally passing into South Europe, and the Grecian Islands. Provisionally placed in *Erythrospiza*, by Gould. *Fig.* an adult male, in his rich rosy colouring. *Female* said to be of an uniform light-brown, faintly clouded with rosy hue; and under-surface, and wings, clear isabella-brown.

PLATE XXV. Bulwer's Petrel,—*Thalassidroma*—*Procellaria*—*Bulwerii*,—an inhabitant of Madeira and adjacent isles. Admitted as a British bird on the evidence of the fact of one individual having been found dead on banks of Ure, near Tanfield, Yorkshire. Distinguished by cuneated figure of tail, and larger size, from all other species of the genus. *Fig.* an adult.

PLATE XXVI. Terek Godwit,—*Limosa Terek*,—la Barge terek, *Fr.* An occasional, but rare, visitant of the European continent. More nearly allied to *Tringa*, than, although provisionally assigned to, *Limosa*. *Fig.* an adult, in its pale-brown winter-plumage; which gives place, in Spring and Summer, to a mottled and spotted garb, particularly on the upper surface where the larger markings assume a lanceolate figure.

PLATE XXVII. Hybrid Grouse,—*Tetrao hybridus* vel *medius*,—le Tétrás Rakhelhan, *Fr.* Probably not a distinct species; but the hybrid progeny of the Cock of the Woods and Black Grouse. Found only in countries, such as Norway and Sweden, which are inhabited by both birds. Would not a careful examination of the sexual organs serve, at once, to decide this controverted point? *Fig.* an adult bird.

PLATE XXVIII. Pectoral Sandpiper,—*Tringa pectoralis*,—le Bécasseau pectorale, *Fr.* of this bird, an inhabitant of North America, one specimen only has yet been killed, or, we believe, seen, in Britain. An account of this interesting occurrence has been given by Mr. Hoy,

in Loudon's *Magazine of Natural History*: and a figure of the bird, by Mr. Eyton, in his continuation of Bewick. The *figure* of the specimen in question,—a female,—executed in Mr. Gould's characteristic style of accuracy and elegance, terminates this, the concluding Part of a work, splendid, interesting, and valuable, beyond all our feeble powers of eulogy or expression; and, certainly, yet unrivalled in that department of Zoology to the illustration of which it is devoted.

In addition to the eight supernumerary Plates, this last Part contains the Title-pages, and Indexes of the Plates, of the five Volumes which the whole is destined to form; Dedication, Preface, Introduction, List of Subscribers, and general List of Plates, systematically arranged under the five Orders of *Raptiores*, *Insectiores*, *Rasores*, *Grallatores*, and *Natatores*.*

* On some future occasion, we propose to give an extended notice of the other ornithological works of the accomplished and indefatigable Mr. Gould; and an abstract of the valuable German work on the *Nests and Eggs of Birds*, to which we have adverted in the former part of this Analysis.

P.

Paradise-street, Birmingham.
March, 1839.

THE MUSICIAN ABOUT TOWN.

THE only theatrical novelty, connected with music, that has occurred since the publication of our last number, has been the opera of "Farinelli," from the pen of Mr. Barnett, and which was brought forward at Drury Lane on the 8th of February. The composers of operatic music appear to have established to themselves a prescriptive right of making ad libitum demands upon the toleration of their audiences for every species of license they may think fit to take with the plot, situation, incident, and character, of the drama they have determined to illustrate and embellish with their own art. The more preposterous the story and treatment of the libretto, the greater the probability that a musician will be found to adopt it. One would suppose (judging by the character of all the operas that

have been produced for the last twenty years) that either the composers take a pride in displaying the triumph of their art over an untoward and inert mass of worthless plot, or are like some unwise and egotistical actors, who can bear no rival in merit near the throne, and therefore make a point of selecting a foil for the character which most immediately comes in contact with their own. Whatever the cause may be, the fact is certain, that when a new opera is announced we always make up our minds to be disgusted with the story, and to lament for the misjudgment or perversity of the composer. Even Mr. Rooke's opera of "Amelie" never could have endured for a fortnight, had it not been for the popular predilection for all music of the Tyrolean character. The drama itself would have been performed to empty benches after the first night. Mr. Barnett's most successful opera has been "The Mountain Sylph," and this not wholly on account of the music in it, charming and classical as that music is ; but the story is an interesting one, and the treatment of it, both scenical and lyrical, reflects high credit upon the authoress, Mrs. Shannon. But Mr. Barnett's music of "Fair Rosamond," taking it through all its range, was of a much higher character than that of his Mountain Sylph : there were in it concerted pieces and melodies worthy of the great masters of dramatic composition ; but his story being absolutely contemptible, the force of his genius alone could not indemnify the treasury of the theatre for the large outlay of expense in producing it ; and Fair Rosamond is a shelved opera, while the Mountain Sylph takes its rotation with other stock pieces, and always attracts an admiring audience when its characters are creditably filled. The same provoking objection holds good with regard to his last grand opera. It would be difficult to collect a longer list of discrepancies, and violations of all propriety, historical and dramatic, in any single piece, than have been ingeniously brought together in the "Farinelli ;" the whole incident in which professes to turn upon the celebrated anecdote of that prince of singers having, by his divine art, (like David of old), exorcised a King of Spain from the demon hypochondria. In the first place, the *poet* (we use this term conventionally, and not from distinction) has made Farinelli wander through Spain upon a speculative tour, and without a sixpence in his pocket ; whereas, he was at that time master of a princely fortune. He has made him a lover, has given him a mistress ; a political intriguer in the cause of the queen ; neither of which characters was consonant with his nature and habits : and, to crown all, he has multiplied the very incident upon which his story professedly

turns, by curing the king—not with Farinelli's song, but with a good dinner and a bottle of wine! The composer, too, has committed a physical anachronism by making his hero a bass singer, whereas he was an artificial soprano. There was the less necessity for this violation of historical truth, inasmuch as there were two other principal basses, and only one tenor; and that one among the subordinates. Add to all these detractions a dialogue ill-written, and without a single point of wit or humour, and we have the ground-work of Mr. Barnett's grand opera.

The prevailing characteristic of the music in Farinelli is, that it is monotonous, and that monotony of a rather grave character. The influence it had upon the unsophisticated portion of the audience was perfectly distinct. It was listened to with all the respect due to a man of acknowledged and high talent; but it produced no simultaneous indications of pleasure. The nature of the applause which did succeed some of the movements, was not to be misunderstood for a moment. The strength of Mr. Barnett's talent appears to lie chiefly in his orchestral accompaniments, wherein he manifests exquisite taste and discrimination. They are always rich and full, never overloaded. He is fertile in resources, and is intimate with the genius and capabilities of each instrument; we have, therefore, no smothering of non-effects by a prodigal employment of the brass band. His full effects are always well built up, and conspicuous in their parts. His fortes are fine constructions of harmony, not mere torrents of noise. Add to all this, there is a handsome disdain of all clap-trap in his music. He does not care to win the good opinion of coach-guards and cads by writing calf-like obligati for the bugle horn. He is content to write as much as he can like Mozart, and he is always choice and judicious in the character of his accompaniments. The most beautiful compositions in the Farinelli are a duett, with clarinett and flute obligati ("Fairest lady, fear no danger"); an excellent piece of fugue writing, at the close of the first scene; and a very charmingly constructed quintett ("Alas! entreaty will prove vain") in the first act. In the second, we particularly distinguished the opening recitative and air by the king, "Where shall I turn for rest?" in the latter movement of which there is a good progression in the bass that bore a strong family likeness to the manner of Mozart. And, lastly, an air by Leonora (Miss Poole), to our taste, the sweetest melody, as a solo, in the opera. It begins, "Cold deceiver, fare thee well!"

Taken as a whole, the music in Farinelli has given us less pleasure than that in the Fair Rosamond; for the reasons that we think

it less characteristic, much less varied, and still less natural. For his own interest's sake, it is to be hoped that, in future, Mr. Barnett will be careful of expending months of anxious thought and beautiful writing upon an unworthy subject.

The first Philharmonic Concert of the season took place on the 4th of March. The two symphonies of the evening were, Beethoven in *D* No. 2, and Mozart in *c* No. 1. The latter has been less frequently performed by this society than the other works of that consummate master: the result, no doubt, of accident rather than intention; for it is throughout fully worthy of his fine genius, and perfectly rational taste. However bold and daring may be the flights of Mozart's fancy, he never for one moment is fantastical, or commits himself by an affectation of any kind. Not only had he the most varied musical genius, but it was at the same time the most justly balanced, and the most uniformly under controul. The intention, the design, and the carrying out, of any composition by Mozart, however complicated, is as clearly an affair of contrivance and selected combination, as to a mathematician would be the arranging of all the points of a syllogism to construct some high argument. His is the direct reverse of a great portion of the modern style of writing; where unrestrained wildness is called bold originality; a string of disjointed passages, freedom in composition; and a contempt of design and order, independence of thought. Mozart aimed at being understood.

After the first symphony, Miss Birch sang, and with praiseworthy care, the recitative and aria from the "*Così fan tutte*"—"Per pietà, ben mio, perdono;" a piece eminently calculated to display a voice of extensive compass, at the same time combining the most exquisite melody with tenderness of expression. The very accompaniments to this song may rank among the triumphs of Mozart's skill. Mendelssohn's last piano forte concerto (No. 2) followed:—the same which was played by the composer himself at the last Birmingham festival, and by Mrs. Anderson at the first Philharmonic concert last year. Mad. Dulcken performed it upon the present occasion, and with distinguished brilliancy; most especially the finale, which is as difficult a movement to express in all its vigour, with its lights and shades of expression, its leanings and sudden crescendos, as in its subject and treatment it is original and great. The *andante*, which flows in the most graceful and natural manner out of the introductory movement, is our favourite; and it is, perhaps, as charming a combination of melody and harmony, as this eminent young genius has hitherto produced.

Miss Hawes and Mr. Manvers (an industrious and promising young singer) sang a duett for counter tenor and tenor, from the new psalm by Spohr, "God, thou art great." The subject of the duett is sweet, but we think too often repeated, and the whole composition too long. In this same work there is a remarkably fine movement, and very original in character, commencing with the altos and basses, "Walk ye in love and truth." The step of the subject is both stately and impressive.

A M.S. overture, entitled "Parisina," from the pen of our admired young countryman, Sterndale Bennett, concluded the first act. It is of a somewhat unusual construction, commencing in B minor, and ending in G. From a single hearing, it appeared to us to exhibit considerable talent, but not a sufficiently varied manner. Two excellent judges, however, near us, who had also heard it at the previous rehearsal on Saturday, agreed that it improved upon acquaintance. This overture is one of Mr. Bennett's earliest productions.

After the noble song from the "Alexander's Feast" ("Revenge") and delivered with triumphant expression by Mr. H. Phillips, Mr. Richardson, formerly a pupil of the Academy, and of the late Mr. Nicholson, performed a fantasia on the flute. The composition was by his master, and in all probability performed by him at one of his annual benefit concerts. We have little to say in commendation of that, but could say much of the pupil he has formed to succeed him. Judging by Mr. Richardson's performance upon this occasion, and by the effect it had upon the whole room, we have no hesitation in saying that he has a fortune within his grasp. His tone is pure and very sweet, more, perhaps, calculated for solo than orchestral performance; his expression is tasteful and delicate; and his execution exact and brilliant. The effect he produced in the room was the more certain and remarkable from the unbroken attention which followed what, even under favourable circumstances, was a long performance; and under less prosperous ones would have been most injudicious. The pretty quartett from Dr. Crotch's "Palestine," "Lo! star-led chiefs," followed; and Romberg's noble overture in D concluded a fine musical concert. Mr. Mori led, and Sir G. Smart conducted. The band have received a few important additions: among them, Baumann the bassoon, and Flower, the double bass.

Mori and Lindley's classical quartett concerts have this season increased in attraction. Last year they were held in Willis's rooms, which became more and more crowded as the series proceeded. This

year the Hanover Square rooms have been proportionately occupied. This circumstance is a favourable indication of the advance that sterling music is making in England; for such has essentially been the class of composition performed at these concerts. We have had the quartetts of Haydn, Mozart, and Beethoven; the quintetts of Onslow, the double quartett and nonetto of Spohr; interspersed with trios of Corelli, and a fugue of Sebastian Bach, arranged for piano-forte and double bass; Dragonetti taking the pedale. This last piece, by the way (the prelude and fugue in κ minor), was not played in the satisfactory manner we could have wished. Mr. Benedict at the piano forte was too loud and hurried, predominating over and clouding the masterly light and shade of Dragonetti's performance. Mr. Benedict is evidently not intimate with the style of that old music: but subsequently, and during the same concert, he and Mr. Schulz played Mozart's magnificent concertante in \flat for two pianos. Both instruments and performers were nicely balanced—Benedict has the more powerful finger; but Schulz's reading of the slow movement was exquisitely refined and polished. This, with the very masterly execution of Mori, in the slow movement to the double quartett, which contains passages of excessive difficulty, were, according to our recollection, the most attractive features of the series; the vocal department, but so so; excepting, however, Miss Masson's animated and excellent reading of Haydn's magnificently conceived cantata, "*Ariana a Naxos*;" his very finest specimen of dramatic composition. From the success that has attended Mr. Mori's exertions this season, it is clear what his energy and activity will lead him to accomplish next year.

Another feature of the musical times is the success of Mr. Moscheles. A series of performances, consisting principally of piano forte compositions, and all of them played by the same artist, would have been received, only a few years ago, with utter indifference. Now we witness a numerous company listening with evident gratification to the fugues and lessons of Scarlatti, the sonatas of Mozart, Beethoven, &c. Some of the most accomplished of Mr. Moscheles' playing has been in the harpsichord lessons of Scarlatti; in which a thorough acquaintance with the author's style, and a perfectly free and neat execution, were equally conspicuous: and his most extraordinary performances for force and brilliancy, were, a selection from his "*Characteristic Studies*," among which the one entitled "*Terpsichore*" (a furiously difficult movement, and in strict keeping and character with its title); also a "*Galop chromatique*," by Liszt, which Mr. Moscheles, it is to be presumed, selected to

show what a host of notes could be squeezed into a bar of "presto" time, and that he could articulate them ; for the movement itself might with propriety have emanated from a lunatic asylum. The compositions we have hitherto heard from the pen of Liast have not impressed us with admiration commensurate with the immense fame he has acquired. One specimen of the old school of writing, played by Mr. Moscheles, proved highly interesting on account of its quaintly pleasing character : and that was a fantasia by Orlando Gibbons, adapted from the old virginal book, by John Cramer. A pastoral variation in one of the movements is extremely agreeable. The composition was also interesting inasmuch as it exhibits the advance which had been accomplished in manual execution so early as the sixteenth century.

One of the new compositions performed at these musical matinees was a sonata for piano forte and violoncello, by Mendelssohn : his Op. 45, and, we believe, latest work. The piece is conceived throughout perfectly in the *sonata style* ; elegant and flowing, and admirably adapted to display the powers of the two instruments for which it is written. In the first movement, the composer appears to have been haunted by a favourite passage of melody in a romance by poor Malibran, called, we think, "Rien n'est doux comme la voix qui dit, Je t'aime." We remember hearing Mendelssohn take the same subject for an extempore fantasia when Malibran was present, incorporating it with two other subjects from her romances, which she had been singing, and treating them with that astonishing power for amplification and combination, which renders him the most accomplished extempore player of the present day.

At the same concert Mr. Moscheles introduced a new serenade by Hummel, upon favourite subjects from Mozart, Haydn, Cherubini, and Spontini. The piece was arranged for a quintett band, consisting of piano forte, violin, harp, clarinet, and bassoon ; and played with exquisite union of tone by Messrs. Moscheles, Blagrove, Wright, Willman, and Baumann. The vocal department at these concerts has been judiciously appointed, both as regards the selection and the singers. The latter were Miss Masson, Miss Dolby, Mrs. Toulmin, Miss Hawes, Miss Kroff, Mr. Parry, jun. and Alfred Novello. Much may be expected from Miss Dolby, judging by the very creditable manner in which she sang the "Ah ! perfida" of Beethoven, and which was transposed one-third below the original key of \sharp flat, to accommodate her compass, being a mezzo soprano. This young lady (one of the Academy pupils) possesses four important requisites to form a successful vocalist : a rich and full

tone ; an accurate intonation ; a facility in reading ; and a self-possessed, but modest, unpretending, deportment. To all these qualities might be added, a handsome exterior ; but "Favour is deceitful, and beauty is vain," says the royal aphorist.

Mr. Moscheles, by these classical performances, is rendering good service to the cause of sterling music. By placing before the rising generation the various styles of the great writers in all schools, ancient and modern, they will be led to appreciate the good and solid by comparing it with the merely showy and difficult.

Since our last report of "The Sacred Harmonic Society's" proceedings, they have twice performed the "Messiah ;" twice the "Israel in Egypt ;" and on the 1st of March Mendelssohn's "St. Paul." The last oratorio is evidently gaining more and more the public estimation ; several of the movements were encored upon the present occasion, and the last chorus was followed by a universal burst of acclamation from an audience that completely filled the hall. The oftener we hear this magnificent work, the more we feel that it is a class of music calculated perceptibly to arrest both the judgment and the sympathy of the listener, and at each successive hearing to dilate and confirm those feelings : this, at all events, has been our own case. We have now been present at three public performances of the whole oratorio ; and we came away more impressed with the magnitude of its design, the majestic beauty and variety of its chorusses, and the profound skill and elegance of its instrumental score. The solo singers upon this occasion were the Misses Birch, Cawthorne, and Wyndham : Messrs. Bennett, Hobbs, Alfred Novello, Green, and H. Phillips. Mr. Surman, the conductor, took several of the chorusses too fast ; not a common fault with him, but an injurious one, more especially in conducting a large body of voices ; for it is more easy to urge on, than to pull back, a multitude of performers. In several of the movements, too, we noticed that whole passages, and important ones, for the bassoon, were omitted. The principal flute, also, was continually incorrect ; and in that sweet chorus, "O be gracious, ye immortals !" we did not hear the flute at all, and yet in this movement it forms a beautiful feature in the score.

As this society has now attained, and is still increasing in, influence and importance, we would suggest two or three points by which their performances would be materially improved and strengthened. In the first place, we understand that they will very shortly have a new organ of their own. Mr. Walker will, we hope, do them justice and himself credit. With the new instrument the

society ought to have a new organist. From his manner of accompanying the chorusses in the Paul the other evening, it was quite evident that Mr. Miller was not equal to the task he had undertaken: it was like the playing at a Methodist chapel. The society should engage the services of such young performers as Messrs. Pittman, or Brown, Smith, or Miss Stirling: all of whom are excellent pedalists. They ought also to insist upon having the instrument tuned to concert pitch. This, we know, is a work of labour to accomplish with any organ builder; but the low pitch of the instrument, upon each occasion that we have heard it of late, has prejudiced the whole orchestra, which, of course, was obliged to be all tuned down, thereby extracting from its vivacity of tone. Lastly, having engaged such first-rate players as Lindley, and Willman, and Harper, they ought not to remain satisfied without adding the services of Dragonetti, whose influence in music of the character which forms the staple of their performances, would be invaluable. There is no instrument like his (in *his* hand) for steadying or directing the march of a chorus. The report lately published of the proceedings of the society is very gratifying and encouraging. *Esto juncta—esta perpetua*: the one will be the result of the other.

The Italian Opera opened for the season on Saturday, the 9th of March, with the "Belisario," and a new soprano of the name of Monau, and an English lady of the name of Croft. The male singers are Tati, the tenor of last year, A. Giubilei, and F. Lablache. With the exception of the last named, the present company may range under the denomination of the curiously disagreeable. The music to the new ballet of "Robert le Diable" has been cleverly selected and arranged from Meyerbeer's opera, by Mons. Nadau, the leader of the band for the ballets, and who is distinguished by his admirable tact in accompanying the dancers. The orchestra is, as usual, magnificent.

The first Ancient Concert took place on the 13th of March. The only change to be perceived in these heretofore scrupulously select performances is, that they are being converted into a school of practice for the Academy pupils. The time was, when an engagement at the Ancient Concerts was sufficient to secure to the performer a passport through the kingdom. That circumstance alone stamped him a first-rate artist. So desirable a distinction no longer exists. Persons who can, and persons who cannot, sing the compositions of the sterling old writers, are now brought into mischievous collision. We have, however, heard with pleasure that Lord Burghersh contemplates an important change in the programmes of the concerts,

which, on account of their uniformity for some years past, might almost have been stereotyped. His lordship will render good service to the art he loves, by reviving in the orchestra for ancient music the forgotten names of such men as Caldara, David Perez, Giacomo Perti, Righini, Durante, Carissimi, with some of the noble fugues of Leo and Bach.

CRITICAL NOTICES OF NEW PUBLICATIONS.

Our Wild Flowers Familiarly Described and Illustrated. By Louisa Anne Twamley, Author of "The Romance of Nature," "Flora's Gems," &c. The Plates engraved after the Author's Drawings. London: Tilt. 1839. 8vo., pp. 308.

THE writer of this charming book is already well known as an authoress, distinguished by all the delicate taste and exquisite feeling which so peculiarly belong to woman, and whose writings present an agreeable contrast to the worldly and satirical propensities exhibited by too many of her sex, in sundry novels and other light productions which serve to amuse the town. Miss Twamley, our readers ought to know, is a *young* lady, too, and neither spoiled by the dissipation of town-life, so often fatal to all pure love of what is beautiful, nor yet one of the class of sentimental persons who lose sight of what is valuable and real in pursuit of what is morbidly imaginative. She lives, she informs us, near a large manufacturing town; a situation to which we cannot but consider that a young person of her fine imagination is, in some degree, indebted for the preservation of a remarkably healthy tone of intellect; and yet her love of the country and of flowers shines out in every page of her interesting publications. As a painter of flowers, also, Miss Twamley is an artist of very high pretensions; and all these delightful acquirements contribute to adorn the pages of the work before us.

Of all the pleasures of which our frame is susceptible, there are none so early developed and none so durable as those arising from natural objects. As soon as the child's little limbs will carry it about in obedience to its will, it quits the mother's hand to pick up the daisies that lift their clandestine heads on the close-avenue lawn; and it screams with delight in the free meadows wherein this pretty flower, not being a forbidden thing, is scattered, in the spring-time, like so much silver over the fresh green grass. But adult age treads close

upon the heels of childhood, and many of us, in populous cities pent, know little more of flowers, except when some charitable country friend sends in a handful of the first offerings of spring; and whilst all the town seems sleeping in cold frost and fog, enlivens our breakfast table with the modest and drooping snowdrop or the lively hepatica. Then, to be sure, summer comes, and each morning a fresh rose reminds us that the out-of-town world is as fragrant and lovely as ever: and it surprises and delights us to find, that when we are old enough to be beginning to surmise that all is vanity, the flowers grow more and more beautiful; that every spring seems more arrayed in loveliness than the last; whilst even the song of birds grows sweeter, and hath a more dying fall, when we quit our places of toil and meditate in the even-tide. And when old age comes, as come it will, who is there of us who does not fancy some calm interval between business and the grave, in which the care of our flowers, and gentle flirtations with the nightingale and thrush, or, in their absence, with the pert but faithful robin, will form our chief delight.

We entreat our youngest readers not to neglect or despise these pleasures in the time of their youth; and when they are old they will not depart from them. Throughout all the years of life, be our station what it may, and our dreams of ambition ever so dazzling, few hours there are which leave so durable and so sweet an impression as those which are devoted to rambling along sequestered lanes with a few light-hearted and innocent children, stopping to look at every modest blossom, running to gather the various wonders of the common grasses, and idly weaving garlands which deck the brow without bringing to it any ache or care. Happy are the children who enjoy these pleasures; and happy they in whom the remembrance of them is so fresh that twenty suffocating summers in money-making cities have not dimmed its precious brightness, or unfitted the heart to reflect it. Yet how often, when thus engaged, we have felt the want of a book which would tell us the names of some of the little lovely flowers which we loved, white and purple gems peeping forth beneath the hedge-row elms, or bolder stragglers leaping with wild luxuriance from branch to branch, as if the meaner shrubs were only made to set forth their greater beauty. Often, deluded by a captivating title, we have added botanical works to our children's library; but as often felt the bitterest disappointment. To turn from the flowers themselves to the work of a botanist is, too generally, like turning from the living to the dead. On the one side, all is beauty and life; on the other, the coldness and rigidity of life extinct. One feels quite convinced that the botanist never saw a flower before it was pulled to pieces, and that all the names are invented to prevent botany from being made vulgar. These guides to botany are very satisfactory, doubtless, to those who know all about it; but to those who are ignorant they teach nothing. In this respect, however, there has of late years been much improvement; and in the work before us we find exactly the book which we have so often wanted. Perhaps, instead of twelve beauti-

ful plates, we should have been glad to see twenty; and instead of so splendidly dressed a book, one that might have been more generally diffused: but publishers are a wilful race, and must have their way. And if this glittering work, which seems intended to lie on drawing-room tables in king's houses, contributes to preserve the worship of nature amidst so much that is in such regions opposed to it, the service will be not insignificant.

Each of the twelve plates in Miss Twamley's book contains exquisitely finished representations of two or three of our ordinary wild flowers; and the text, thrown into the form of conversations between a very excellent "Aunt Lucy" and her niece "Agnes," and a certain "Mr. and Mrs. Evelyn," and their daughter "Constance," contains animated descriptions of these and almost every other familiar English flower, interspersed with very interesting historical anecdotes, and not a little useful scientific information, although the parade of science is most carefully avoided. The first plate contains the *Blue Anemone*, the *Small Celandine*, and, chief of all, the *Snowdrop*, of all spring flowers one in the most general favour, and partly for its being one of the first heralds of the reviving world after the winter's death. But how attractive its beauty! Its tender stalk, its drooping head, as if modest from very consciousness of beauty, its snow-white outer petals, the delicate pencillings of green that variegate its shorter and inner ones, touching their outer rim, and leaving white the upper inner border!—a very lavishing of simple charms on the first flower of the year, betokening boundless stores of beauty to be bestowed without stint on all the successive blossoms of the flowering months to come! There are homilies, indeed, in these things. They speak of an unseen world, and foreshadow its splendour; and more and more they speak to us as our minds receive more cultivation; as if some age of the world would come, in which all their mysterious revelation would be read with clearer eye.

We must quote what Miss Twamley says of the *Snowdrop*, as it contains a very amiable apology for the botanists, whose vitality we have questioned. Aunt Lucy, tempted out by little Agnes, ventures into the garden to see "the first *Snowdrop*:"—

"Is it not a delicate little beauty?" cried Agnes, gently raising the white bell, and showing the green streaked under petals, and the golden antlers within.

"Yes: I always think the name this chaste, modest little flower has received, of 'The Fair Maid of February,' a most graceful fancy; I wish I knew to whom we are indebted for it. Our own name of *Snowdrop* is beautifully descriptive; so is the French, *perce-neige*, and the Italian *bucca-neve*, both meaning snow-piercer. The botanical name, *galanthus*, is derived from the Greek, and signifies milk-flower."

"Ah!" said Agnes, "I like those names; they are sensible, and one can remember them, because they mean the thing they belong to; but the strange, difficult, out-of-the-way words so often given as

names of flowers, are enough to frighten one from opening books on botany or gardening."

"I fear me many young people are of your mind, Agnes; but though there may seem some reason in your objections to 'hard names,' as you term them, I think much of the complaint is founded in your own inattention and carelessness. In the first place, you must remember that the thousands of plants with which our beautiful world is adorned, have required no small ingenuity and research from their botanical sponsors to find names for them, and every new vegetable discovery increases the difficulty. Descriptive names cannot always be adopted, or, if they were, the necessity for clearly distinguishing such species as very nearly resembled each other, would soon turn a list of flowers into a dictionary of definitions, and, I need not tell you, become tenfold more puzzling than the most terrible polysyllable extant. Again, very many, indeed nearly all, the names of genera are strictly descriptive, though, being derived from Greek and Latin words, you will not perceive their appropriateness without a translation."—(Page 2.)

But the lovely flower which suggests this little discussion is soon reverted to. The little pupil enquires if it is one of our native plants, or one which has been brought to England.

"The Snowdrop," replied Aunt Lucy, "must assuredly take the lead in our chronicle of English wild-flowers now, although I am much inclined to think it is not absolutely a native of the soil, from the fact that the old poets do not in any way allude to it, but speak of the primrose as the first flower of spring. The dramatists Beaumont and Fletcher say—

'Primrose, first-born child of Ver,
Merry spring-time's harbinger,
With her bells dim.'

Shakspeare has no Snowdrop in his delicate groups of flowers, though he speaks of 'Daffodils

'That come before the Swallow dares, and take
The winds of March with beauty.'

Ben Jonson, another of the grand old dramatists, who loved to talk of flowers as well as we do, and did it with such grace and eloquence that he seems to paint what he describes, calls the Primrose the 'spring's own spouse;' but says not a word about our chaste little darling here: and all this is to me very conclusive evidence that snowdrops are a later acquisition to our woods and meadows. That excellent botanist, Mr. Sowerby, from whose delightful books I have learned so much, considers it indigenous, from its being found far from uncultivated ground; and it may be so, but I generally meet with it in places where it is probable that gardens *have* been."—p. 4.

We should like here to stretch our reviewing privilege so far as to quote full seventeen pretty stanzas of the fair writer in further illustration of the *Primrose*; but the above extracts will shew how well Miss Twamley contrives to combine useful instruction with observations suggested by feeling and fancy; and to us this constitutes a very great charm of her book. More than two hundred and fifty wild flowers and shrubs are described in it; and concerning each we find some information of a pleasing and useful kind. The grouping of the flowers in the plates is of itself indicative of the deepest love of nature, and the utmost refinement of taste. Some of them make us even restless in our study; impatient to sally forth into the woods and lanes where the originals flourish. For instance, the group of blue and white violets in Plate III, which brings the heavenly perfume of that retiring flower fresh to the sense. But we shall let our little friend Agnes speak:—

“Violets! violets! beautiful, sweet, blue violets!” cried she, skipping off to gather some: “oh, how deliciously they smell! but you saw them first, Aunt Lucy.”

“I smelt them and *pointed* them, my dear, leaving you the pleasure of securing the game; and well knew I should receive my share,” she continued, as Agnes presented a delicate little bunch of the sweet flowers and their dark-green leaves. “I always think the first violets of spring are the sweetest-seeming flowers of the whole year.”

“I wish you would write me something about them, then, Aunt Lucy, will you?”

“Oh! I do not promise to give you both rhyme and reason for all our treasures; and you may find hosts of sweet things written of violets from time immemorial: for Sir Walter Scott said, very truly, that

‘The violet in her greenwood bower,
Where birchen boughs with hazels mingle,
May boast herself the fairest flower
In glen, or copse, or forest dingle.’

And all poets, in all ages, have sung her praises. One of our moderns, the illustrious Thomas Moore, makes some quotations in his *Lalla Rookh*, to show us that these dainty flowers are made use of practically, as well as poetically, in the east, where the most esteemed sherbet is flavoured with them. They are made scientifically serviceable here in the form of a syrup, which detects an acid or alkali in chemical compounds, by turning red with the former, and green with the latter. Violets are cultivated for this purpose at Stratford-on-Avon, and very appropriately; for our immortal Shakspeare, by his often mention, proves his love of them; and their perfume around his native place seems to my fancy a fit and delicate tribute to his memory. We are fortunate in having both blue and white sweet violets in our neighbourhood, for in some localities the blue are not

found ; and they are so lovely together, the white ones so delicately tinged with purplish pink on the back of the petals, and the others so rich and varied in their tint. We call violets blue, yet it is not very correct, for they are of all hues, from full purple down to light pale lavender. The scentless violets, that come in May, are more truly blue. What are you studying now, Agnes ?”

“I am trying to find out for myself whether this is a Buttercup or not, Aunt Lucy, and cannot decide ; will you please to help me ?”—(Page 24).

But we must not go on quoting about the Buttercup, nor about the Lesser Celandine, which is the flower the pretty Agnes is puzzled with, although Miss Twamley illustrates it with her masterly pencil, and with Wordsworth's well-known lines. Yet one word more about violets, and we have done. It is interesting to know how widely this delicate and elegant little flower is scattered over the world.

“I wonder if all countries have as beautiful early spring nosegays as we have found this morning,” said Agnes. “Where do violets grow wild, besides England ?”

“All over Europe,” replied Aunt Lucy ; “and travellers have found them in many other parts. In Arabia they are abundant, and much celebrated by the poets ; also in Japan, where they flower from January to April. Desfontaines says both the blue and white are plentiful in the palm groves of Barbary. Hasselquist found it in Palestine, and Loureiro near Canton, in China. Gerarde says it was customary in his time to make them into ‘garlands for the head, nosegays and posies, which were delightful to look on, and pleasant to smell to ;’ but he does not mention the scented ones as being wild. If we visit Wales this summer, we shall find the yellow violet on the mountains there, which Gerarde says will not grow in a garden, and I think it very likely.”—(Page 27.)

Mrs. Howitt's Spring Song of the Violet concludes the chapter. We may mention that old Gerarde, whom Miss Twamley quotes more than once, was a London surgeon, one of the greatest botanists of his time (which was Shakspeare's time) ; for he was chief gardener to the famous Lord Burleigh.

We might enrich our pages with borrowing from Miss Twamley's notices of the Oak, the Elm, the Willow, the Poplar, and many other of our trees ; or, with even more pleasure, take sweet passages from her observations on the daffodil, the primrose, or the lily of the vale. But without pilfering from every chapter, and robbing the book of all the plates also, it would be impossible to give our readers an idea of the beauty and good sense of the publication. Lessons of pure and unaffected morality occur here and there, which cannot fail to come home to the young hearts to which they are addressed : and the warmest philanthropy is evidently under the guidance, in the authoress's well-ordered mind, of a sound and healthy judgment. For a parent anxious that his children should be worshippers of nature, and yet turn their devotion to profitable uses ; or

for a lover of nature debarred by his situation from frequent communion with the glorious works in which he loves to see evidences of the Great Creator's unfailing hand, we know no book which so thoroughly recommends itself. In an especial manner also, it seems adapted to the service of those who have the care of young ladies, and who, often full of intelligence and feeling themselves, yet need every help to rouse the faculties, and impart a salutary stimulus and direction to the affections of the various minds with which they have to deal.

A book of this kind gives, in such cases, precisely the assistance required: it attracts attention without any laborious effort of the governers, and whilst seeming only to amuse in hours of relaxation, disposes to that *love* of knowledge the absence of which is the most formidable obstacle to its acquirement; so that to instil it is the most important achievement of all education.

Yet again we open the leaves of this beautiful book; and, taking for the present a farewell look at the honeysuckle, the convolvulus, the heaths, and the hare-bell—all delineated with rare loveliness—reluctantly close its pages, as if in so doing we shut out the flowery scenes of “some bright isle of rest.”

Experiments and Observations on the Gastric Juice and the Physiology of Digestion. By William Beaumont, M.D. Surgeon in the United States Army. Reprinted from the Plattsburgh Edition, with Notes by A. Combe, M.D. Edinburgh and London. 1838. pp. 319.

THE reasons which have induced Dr. Combe to reprint the present work from the American original, are, 1st, a strong sense of its inherent importance, and of the numerous applications which may be made of the facts and principles developed in it, to the prevention and cure of disease; 2nd, its comparative inaccessibility to the European physiologist, from the difficulty which still exists of procuring it on this side of the Atlantic; and lastly, an earnest desire that the author should obtain that credit which is unquestionably due to his disinterested and indefatigable labours.

Dr. Beaumont has had the rare good fortune to meet with a case in which an artificial opening into the stomach existed; and through this opening he could see every thing that took place during the progress of healthy digestion: and with the most disinterested zeal and admirable perseverance, he availed himself of the opportunity thus afforded of advancing human knowledge, by engaging the patient to live with him for several years, and to become the subject of numerous and carefully conducted experiments. These experiments confirm the doctrines (with some modifications) taught by Spallanzani and many of the most enlightened physiological writers. His observations were made, our author remarks, in the true spirit of in-

quiry, suggested by the very extraordinary case which gave him an opportunity of instituting them. Having no particular hypothesis to support, Dr. B. has honestly recorded the results of each experiment exactly as it occurred, and submits them to the public, who will duly appreciate the truths discovered, and the confirmation of opinions which before rested on conjecture. Dr. B. produces a body of facts which cannot be invalidated. His opinions may be doubted, denied, or approved, according as they conflict or agree with the opinions of each individual who may read them; but their worth will be best determined by the foundation on which they rest—namely, that of incontrovertible facts.

The opportunity of making his experiments was afforded to Dr. Beaumont in this way. Whilst stationed at Michillimackinac, Michigan Territory, in 1822, in the military service of the United States, the following case came under his care. Alexis St. Martin, a Canadian of French descent, about eighteen years of age, of good constitution, robust and healthy, was accidentally wounded by the discharge of a musket on the 6th of June, 1822. The charge, consisting of duck shot, was received in the left side, the youth being at a distance of not more than one yard from the muzzle of the gun. The contents entered posteriorly, and in an oblique direction, forward and inward, literally blowing off integuments and muscles to the size of a man's hand, fracturing the ribs, and lacerating the lower portion of the left lobe of the lungs and the diaphragm, and perforating the stomach. Dr. B. saw St. Martin in twenty or thirty minutes after the accident, and found a portion of the lung as large as a turkey's egg protruding through the external wound, lacerated and burnt; and immediately below this another protrusion, which proved to be a portion of the stomach lacerated through all its coats, and pouring out the food he had taken for breakfast. After cleansing the wound, and replacing the lungs and stomach as far as practicable, Dr. B. applied the carbonated fermenting poultice, keeping the surrounding parts constantly wet with a lotion, and giving cooling medicinals internally, in liberal quantities. It is unnecessary to follow the doctor through the minutiae of this interesting case; suffice it to say that for seventeen days all that entered St. Martin's stomach by the oesophagus soon passed out through the wound, and the only way of sustaining him was by means of nutritious injections. It is a remarkable circumstance that no sickness, nor unusual irritation of the stomach, not even the slightest nausea, was manifested during the whole time. By the 6th of June, 1823, one year from the time of the accident, the injured parts were all sound, and firmly cicatrised, with the exception of the aperture in the stomach and side. The perforation was about two and a half inches in circumference, and the food and drinks constantly exuded, unless prevented by a tent, compress, and bandage. These dressings were necessarily applied to relieve his sufferings, and retain his food and drink, until the winter of 1823-4. At this time a small fold or doubling of the coats of the stomach appeared form-

ing at the superior margin of the orifice, slightly protruding, and increasing till it filled the aperture. This valvular formation adapted itself to the accidental orifice, completely preventing the efflux of the gastric contents when the stomach was full, but easily depressed with the finger.

The usual mode adopted by Dr. B. of extracting the gastric juice, was by placing the subject on his left side, depressing the valve, and introducing a gum elastic tube five or six inches into the stomach. The quantity of fluid ordinarily obtained was from four drachms to one and a half or two ounces. Its extraction was generally attended by that peculiar sensation at the pit of the stomach termed *sinking*, with some degree of fainting, which rendered it necessary to stop the operation. The usual time of extracting the juice was early in the morning, before he had eaten, when the stomach was empty and clean.

Man, destined to live in all latitudes, and obliged to procure his food from both the animal and vegetable kingdoms, may be surely said to be omnivorous. By aliment is meant whatever substance affords nutrition, or whatever is capable of being acted upon by the organs of digestion. The facility of digestion of different articles of diet, and the quantity of nutrient principles which they contain, have been the subjects of some discrepancy of opinion amongst physiologists. Aliments obtained from plants are less nutritious than those furnished by the animal kingdom, because, in a given bulk, they contain fewer parts that can be assimilated to corporeal substance. The digestibility of vegetable aliments is, however, dependent upon the same laws as those that govern the solution of animal food; and it is facilitated by division and tenderness. However various our aliments may be, the action of our organs always separates from them the same nutritious principles; in fact, whether we live on animal or vegetable substances, the internal composition of our organs does not alter—an evident proof that the substance which we obtain from aliment to incorporate with our own, is always the same: and this affords an explanation of the saying of Hippocrates, "There is but one food, but there exist several forms of food." The *quantity*, too, of aliment is probably of more importance than the *quality*, to ensure health. The system requires much less than is generally supplied to it. The stomach disposes of a definite quantity: if more, therefore, be taken, than the actual wants of the economy require, the residue remains in the stomach, and becomes a source of irritation, and produces a consequent aberration of function; or it passes into the lower bowels in an undigested state, and extends to them its deleterious influence. Dyspepsia, our author observes, is oftener the effect of over-eating and over-drinking than of any other causes. This leads us to the consideration of hunger and thirst.

Hunger is a kind provision of nature, which warns us of the propriety of repairing the loss which the body is continually undergoing. Much enquiry has been made on this subject, and many

theories have been given to account for the phenomenon. The proximate cause of hunger has by some been conceived to depend on the friction of the nervous papillæ of the empty stomach on each other; by others it has been imputed to the irritation produced on its parietes by the accumulation of the gastric juice; it has been thought to depend on the dropping down of the liver and spleen, when the stomach and intestines, being empty, cease to support those viscera. Magendie, convinced that all the theories on this subject were unsatisfactory, comes to this conclusion, that "hunger is produced, like all other internal sensations, by the action of the nervous system; and it has no other seat than in this system itself, and no other cause than the general laws of organization." This subject is unquestionably involved in considerable doubt and obscurity, but, although confessedly obscure, we are not denied the privilege of patient investigation, and persevering search after truth. Anxious mainly to elicit investigation on the subject, Dr. Beaumont submits the following *theory of hunger*, believing it to be as reasonable, to say the least, as any that has been propagated. Dr. B's impression is, that the sensation of hunger is produced by the *distension* of the gastric vessels, or that apparatus, whether vascular or glandular, which secretes the gastric juice, and is believed to be the effect of repletion by this fluid. On applying aliment to the internal coat of the stomach, which in health is merely lubricated with mucus, innumerable minute papillæ, the orifices undoubtedly of the gastric vessels, immediately throw out a quantity of the fluid, which mixes with the food. This effect, Dr. B. adds, is too sudden, and the secretion too copious, to be accounted for on the ordinary principles and laws of secreting mucous surfaces. And it is more than probable, he observes, in fact, it almost amounts to demonstration, that a large quantity of this fluid must be contained in appropriate vessels, during a fast, ready to obey the call of aliment. Not that our author would be understood to say that the whole quantity necessary for an ordinary meal is eliminated previous to the commencement of alimentation; but that enough is contained in the gastric vessels to produce the sensation of hunger.

Thirst, like hunger, is a wise provision of nature, designed, not to replenish the watery solids of the system, but to dilute the fluids that are carrying on these processes. The calls of thirst are still more absolute than those of hunger, and it is much less patiently endured. Dr. B. apprehends a remote cause of this sensation may be found in the viscosity of the blood, which requires a liquid to render it more fluid, and more susceptible of introduction into the capillaries and secreting surfaces. Dr. Beaumont candidly offers these theories for consideration, persuaded that they will be allowed such weight as they may have a right to claim; more than this he has no wish to ask.

The preliminary steps in the process of digestion are mastication, insalivation, and deglutition. If the *materia alimentaria* could be introduced into the stomach in a finely divided state, these operations

would not be necessary. According to some of Dr. B.'s experiments, aliment is as well-digested and assimilated, and allays the sensation of hunger as perfectly, when introduced directly into the stomach, in a proper state of division, as when the previous steps of mastication, &c., have been taken. Although Dr. B. does not wish to deny the utility of the saliva, he does not attach the importance to its action that some physiologists do. In most of the experiments, artificial digestion was performed without its admixture, and the chyme thus formed exhibited the same sensible appearances, and was affected by re-agents in the same way, as that formed from food previously masticated, mixed with saliva, and swallowed. Its legitimate and only use, he considers, is to lubricate the food, and facilitate its passage through the organs of deglutition.

When food is received into the stomach, the gastric vessels are excited by its stimulus to discharge the contents, and the chymification commences. With respect to the agent of chymification, no part of physiology has perhaps so much engaged the attention of mankind. It has been a fruitful source of theoretical speculation from the father of medicine down to the present age. It was reserved for Spalanzani to overthrow all the unfounded hypotheses of *concoction*, *putrefaction*, *trituration*, *fermentation*, and *maceration*, and to erect on their ruins a theory which will stand the test of scientific examination and experiment. He established a theory of chemical solution, and taught that chymification was owing to the solvent action of a fluid secreted by the stomach, and operating as the true menstruum of alimentary substances. To this fluid he gave the name of gastric juice. Pure gastric juice, when taken directly out of the stomach of a healthy adult, unmixed with any other fluid, save a portion of the mucus of the stomach, with which it is most commonly united, is a clear transparent fluid, inodorous, a little saltish, and very perceptibly acid. Its action on food is indicative of its chemical character. Like other chemical agents, it *decomposes* or *dissolves*, and after combining with a fixed and definite quantity of matter, its action ceases. When the juice becomes saturated, it refuses to dissolve more; and if an excess of food have been taken, the residue remains in the stomach, or passes into the bowels in a crude state, and frequently becomes a source of nervous irritation, pain, and disease, for a long time, or until the natural energy restores the vessels of this viscus to their natural and healthy action, either with or without the aid of medicine. This important principle ought never to be lost sight of. Derangement of the digestive organs, slight febrile excitement, fright, or any sudden affection of the passions, causes material alteration in the appearance of the gastric juice. General febrile irritation seems entirely to suspend its secretion into the stomach, and renders the villous coat dry, red, and irritable: hence the obvious necessity of a scrupulous attention to diet during fever and other acute diseases. Food, under these circumstances, can afford no nourishment, but is actually a source of irritation to this organ, and consequently to the whole system.

On one occasion, Alexis St. Martin had been *drinking* ardent spirits pretty freely for eight or ten days, and the appearances noted by Dr. B. were, some redness and apthous patches on the mucous surface of the stomach, which was empty, but not healthy. On the following day, these appearances had increased considerably on the exposed surface, and the secretions were vitiated. Circumstances continued through the next day very similar; but on the third day they were greatly aggravated. Notwithstanding this diseased appearance of the stomach, Alexis complained of no symptoms indicating any general disarrangement of the system, except an uneasy sensation and tenderness at the pit of the stomach, with some giddiness, and dimness, and yellowness of vision, on stooping down and rising up again. Dr. Beaumont observes that diseased appearances, similar to these just mentioned, have generally succeeded to some appreciable cause. Improper indulgence in eating and drinking has been the most common precursor of these diseased conditions of the coats of the stomach. The free use of ardent spirits, wine, beer, or any intoxicating liquor, when continued for some days, has invariably produced them. We may justly observe upon this, that it affords some of the strongest arguments which it is possible to obtain in favour of temperance, in eating as well as drinking. Many persons who habitually indulge in the use of stimulants, although not what is called excess, defend the practice by affirming that they experience no bad effects from them. If, like St. Martin, we could *see* the progress of stomachic disease from its first dawn, dyspeptic complaints, and their parent, intemperance, would be less frequent than they are.

It is seldom that bile is found in the stomach, except under peculiar circumstances. When the use of fat or oily food has been persevered in for some time, there is, generally, the presence of bile in the gastric fluids. Whether this be a pathological phenomenon induced by the peculiarly indigestible nature of oily food, or whether it be a provision of nature to assist the chymification of this particular kind of diet, Dr. B. has not yet satisfied himself. Oil is affected by the gastric juice with considerable difficulty. Water and alcohol are not affected. Fluids of all kinds are subject to the same exemptions, unless they hold in solution or suspension some animal or vegetable aliment. Fluids pass from the stomach very soon after they are received, either by absorption or through the pylorus. This affords a solution of the reason why exhaustion from abstinence is quicker improved by liquid than by solid aliment—the rapid absorption into the system of a part of the liquid aliment, and the support which it consequently gives, almost immediately. Our limits will not permit us to follow Dr. B. through all his experiments, but the following may be taken as a condensed view of them.

Vegetables.—Cabbage raw required 2 hours 30 min. for its digestion, boiled 4 hours (its digestion much assisted by vinegar). Potatoes roasted 2 hours 30 min., boiled 3 hours 30 min. Carrots boiled 3 hours 15 min. Beet boiled 3 hours 45 min. Turnips boiled 3

hours 30 min. Beans boiled 2 hours 30 min. Parsnips boiled 2 hours 30 min.

Farinacea.—Rice boiled, soft, was converted into chyme in an hour. Sago in 1 hour 45 min. Tapioca, barley, &c. in 2 hours. Bread fresh 3 hours, stale 2 hours. Sponge-Cake 2 hours 30 min.

Fruit.—Apples sour and hard, 2 hours 50 min., mellow 2 hours, sweet and ripe 1 hour 30 min. Peach mellow 1 hour 30 min.

Fish.—Trout boiled or fried 1 hour 30 min. Codfish cured and boiled 2 hours. Oysters undressed 2 hours 55 min., roasted 3 hours 15 min., stewed 3 hours 30 min. Bass boiled 3 hours. Flounder fried 3 hours 30 min. Salmon salted and boiled 4 hours.

Poultry.—Turkey roasted 2 hours 30 min., boiled 2 hours 35 min. Goose wild, roast 2 hours 30 min. Chicken fricasseed 2 hours 45 min. Fowls, domestic, boiled or roast, 4 hours. Ducks, tame, roast, four hours; wild, roast, 4 hours 30 min.

Meats.—Soused tripe and pig's feet, fried or boiled, 1 hour. Venison steak broiled 1 hour 35 min. Calf or lamb's liver broiled 2 hours. Sucking pig 2 hours 30 min. Mutton broiled 3 hours, boiled 3 hours, roast 3 hours 15 min. Beef fresh broiled 3 hours, roast 3 hours, lightly salted and boiled 3 hours 36 min., old hard salted 4 hours 15 min. Pork steak broiled 4 hours 15 min., lately salted and boiled 4 hours 30 min., stewed 3 hours, roast 5 hours 15 min. Veal broiled 4 hours, fried 4 hours 30 min.

Varieties.—Eggs raw, 2 hours; roasted, 2 hours 15 min.; soft boiled, 3 hours; hard boiled or fried, 3 hours 30 min. Custard, baked, 2 hours 45 min. Milk, 2 hours. Butter and cheese, 3 hours 30 min.: the latter difficult of digestion, from its closeness of texture and containing a large proportion of oil. Suet, 4 hours 30 min. Apple dumplings, 3 hours. Calf's-foot jelly digested in little more than half an hour. Soup, beef, vegetables, and bread, 4 hours. Soup barley (query, gruel?) boiled 1 hour 30 min.

The Cathedral Bell. A Tragedy, in five acts. By Jacob Jones, Barrister at Law. 8vo. London, 1839. pp. 59.

THE great neglect, in late years, of the legitimate purposes and objects of the drama, and the frequent prostitution of the talent employed in its service to the more than questionable taste of the age, have tended much to depreciate the value of theatrical representations in the estimation of reflecting persons. With a few bright exceptions, the productions of the stage for the present century have merely exhibited the talent or peculiarity of an individual actor, instead of generally personifying the passions and sentiments which characterise society.

The revival lately of many of Shakspeare's best plays, reflects great credit on the conductors of our metropolitan theatres. There will always be found some few kindred spirits who can truly admire the genius of the immortal bard, but with the mass of the

play-going public we fear that gorgeous scenery and incantation machinery, with a large corps of supernumerary imps and angels, aided by noisy music and lascivious dancing, will carry off the palm of applause from classical heroes and heroines.

Mr. Jones complains, and, we think, with some justice, of the disappointment he has experienced in not having his play performed; but he may console himself by thinking that he is not the only "gem of purest ray serene," that is swept over by the ocean of public prejudice, and pressed down by the incubus of private interest. Besides, it should be remembered that in the present day lions are so much in request that even a lady, to be interesting, must be associated with that word.

The scene of the *Cathedral Bell* is laid at the city of Saragossa: the time is during the struggle between the Spaniards and Moors. The principal characters are Sebastian, the governor of Saragossa, a noble patriot; Claudio his son, a fiery and generous youth; Francesco, the Moorish commander, who is a renegade; Ricardos, one of Sebastian's officers; and Herodia and Octavia, wife and daughter to the governor. The story of the piece is, that while Francesco is besieging the city, Claudio makes a sally and is taken prisoner. The Moor sends a message to Sebastian, saying that, unless he surrenders the town, his son shall die a lingering death; but the chivalrous Spaniard, faithful to his trust, refuses the conditions. Herodia pleads with all the eloquence of a mother's agony for her son, but in vain. She then resolves to go to the camp and supplicate Francesco. He promises that if she will deliver up the gates Claudio shall be liberated. In the meantime Ricardos, a rejected suitor of Octavia, turns traitor, and engages to admit the enemy within the walls. As night approaches, Sebastian heads a body of his veterans to make a last effort for his son. But whilst he is gone the Moors gain access to the town. He returns to find the gates closed against him. He rallies all his energies, forces the barrier, and the crescent is overthrown. He engages hand to hand with the renegade, whom he slays, but is himself mortally wounded. The subordinate characters all die off in proper order. There is occasionally a mysterious tolling of the Cathedral Bell, which gives a maniac girl, who has been deserted by Francesco, an opportunity of chaunting a monotonous distich. On the whole, the plot is well managed, the characters are duly sustained, the diction is chaste and nervous, and the arrangement of the incidents displays a powerful dramatic conception. We conclude our notice of the *Cathedral Bell* with the following extract, and with wishing Mr. Jones every success in his literary pursuits.

In the last scene of the first act, there is a spirited dialogue between Francesco and Claudio, which is concluded by the following soliloquy by the former:—

"Breath, breath, proud spirit! breath,—nor choke me quite!
Down, swelling passion! down and leave, for shame,

A conqueror's soul unconquer'd of a boy—
 The plagues of Egypt settle on her head,
 This witch, this prophetess, that dogg'd our march,
 Like a demoniac starting from the tombs—
 What fatal inspiration sent her forth
 To hail our land with the croak of doom ?
 ' When thou art bearded by a Christian youth,
 ' And call'd a Renegade to thy face,
 ' Then lost Francesco ! then,' the sibyl cried,
 ' Calamity impends, defeat and death ;'
 A spell is round my path—now, like a knell,
 The braggart's taunts are ringing in mine ears ;—
 What boot my honours, my most high estate,
 My faith abjured, and fortune for the change,
 If this rash boy has summ'd my lease of days,
 And cut me short of Paradise on earth ?
 What, unto minds of purpose and resource,
 Is equal bliss to homage and control,
 Rank undisputed, awe that keeps them worshipping'd,
 And pays them tribute of all things below ?
 Poor are the puling ecstasies of love,
 To that most spiritual sense of self-existence
 Which shares with heaven the thunder-spell of power,
 And, among mortals, crowns one mortal—God !
 I hear a whisper darkle on the air,
 I see no speaker, but I feel the spell,
 Which way I turn, its voice is in mine ear,
 It saith, it saith,—the ruler is a man,
 And man is mortal—that I knew before.
 To mar my course that knowledge I defy !
 Then, come what may, come whatsoever can,
 All ills in life, or woes beyond the grave,
 The die is cast, and I must on—on—on—
 Hence, chill forbodings ! terror-stirring qualms !
 Decision's blight ! Ambition ! thou alone,
 Fill up the mighty compass of my hopes
 And stamp the grand climacteric of my fate !
 Form me a perfect renegade, in this,
 To stand absolv'd of every human tie,
 And be stone-dead to pity, or remorse—
 Avaunt ! away ! uneasy whispers, down !
 Conquest my cry, be greatness my reward !”

OUTLINES OF PERIODICAL LITERATURE, RELATING TO THE NATURAL SCIENCES & PHILOSOPHY.

(Continued from Vol. 9, page 356, of this Journal).

THESE "Outlines," on the present occasion, are necessarily extended so as to embrace the Periodical Literature of four months, including the last for MDCCLXXXVIII. They commence with

The London and Edinburgh Philosophical Magazine and Journal of Science; conducted by Sir David Brewster, F.R.S. Richard Taylor, F.G.S. and Richard Phillips, F.R.S. 8vo. London, 1838-9.

DECEMBER.—Here, for a first article, you meet with a concise experimental paper by Dr. Jacobi on the galvanic spark. Professor Johnston then adduces remarks on some apparent exceptions to the law that like crystalline forms indicate like chemical formulæ: his object, in other words, is to examine certain cases of isomorphous coincidence between substances of which the chemical formulæ, according to received views, are wholly irreconcilable; and, in an elaborate table, he arranges all the cases which have hitherto come to his knowledge. In an eleventh series of his experimental researches in electricity, Dr. Faraday treats of specific induction or specific inductive capacity; and his subjects are, shell-lac, glass, sulphur, spermaceti, rectified oil of turpentine, naphtha, rare and dense air and the different gases, with a summary on the nature of inductive action. Mr. Grove describes a new voltaic combination, which, he expects, may possibly throw some light upon the organization of the torpedo: his main object is, to direct attention to the porous filter as likely to form an important element in the analysis of the voltaic trough. A paper, by Mr. Nevins, on the reduction of the chlorides of mercury when mixed with organic substances, is followed by Mr. Craig's notes on the process for obtaining bichromate of the perchloride of chrome, as viewed under the microscope; by Mr. Gregory's on the experiments detailed in Mr. Waldie's paper on combustion and flame; by Z. Y.'s on a certain difficulty connected with the demonstration of Euclid, B. I, prob. 29; and by Mr. Gassiot's on a remarkable difference in the heat attained by the electrodes of a powerful constant battery. Dr. Kane's analytical investigation into the composition of essential oils, embraces those of rosemary, marjoram, peppermint, penny-royal, spearmint, and lavender, with explanatory remarks; and Prof. Sylvester concludes his observations on the motion and rest of fluids, with the statement—that he looks for the true explanation of the phenomena of capillary attraction "to the non-applicability of the equations for free fluids to the case of fluids confined at the boundaries, and to an independent investigation upon the minimum of principle for this class of problems." An original theorem of the same writer's on an extension of Sir John Wilson's theorem to all numbers whatever, carries you to the Proceedings of the Royal Society; and, from these, to the notes of intelligence and miscellaneous articles. Here, you have an account of xyloidine and its

properties, by M. Pelouze; M. Lassaigne's remarks on the determination of iodine and kelp; MM. Matteucci and Schoenbein on the polarization of platinum electrodes; Mr. Henry on sulphocyanide of potassium as a test for strychnia; M. Regnault on pectic acid, and the pectates of potash, soda, and ammonia; M. Brunner on the decomposition of siliceous minerals by means of hydrofluoric acid, and on the separation of compounds of the oxides of antimony and lead; Prof. Johnston on the analysis of the resins; M. Melly on the composition of comptonite, which he proves to be a hydrous silicate of alumina, lime and soda; M. Dumas on the action of chlorine on acetic acid, and M. Masson on the action of chloride of zinc on alcohol; M. Pfaff on the combination of azote with metals; M. Boudet on the solubility of binoxide of mercury in water; MM. Wöhler and Liebig on the decomposition of lithic acid by nitric acid; MM. Cap and Henri on lactate of urea; Mr. Griffith on the existence of caoutchouc in plants; and Dr. Natterer on the *Lepidosiren paradoxa*, which he describes before leaving you to examine the meteorological observations and tables.

JANUARY, MDCCCXXXIX.—First in the commencing volume, Dr. Turner's chemical examination of the Fire-Damp from coal-mines, affords results that may prove conducive to the safety of miners: it includes a tabular view of the composition of all the gases which have been analysed. With meteorological observations instituted in Colombia between 1820 and 1830, Col. Wright combines much various information: he distributes the temperatures through the vast territory of Colombia into five zones—the level of the ocean; the small elevations, from five hundred to fifteen hundred feet; the slopes of the Cordillera, from two thousand to seven thousand feet; the table-lands, from eight thousand to ten thousand feet; and the *paramos*, from eleven thousand feet to the limit of perpetual snow. Mr. Talbot's article on "Analytic Crystals" is illustrated by six beautiful coloured figures: he discovered this class of crystals, during a course of experiments with his polarizing microscope. J. S. W. propounds some remarks on certain conditions under which light is received from the heavenly bodies: he is desirous of seeing this question put to extensive scientific investigation. An account of a remarkable heat observed in masses of brine kept in large reservoirs, is furnished by Mr. Prinsep, with details of ten experiments: he acknowledges his inability to offer any explanation of the cause of this heat. Sir J. Herschel describes a chemical examination of a specimen of native iron from S. Africa: and, from the results, he judges that this specimen has equal claims to a meteoric origin with any other masses of native nickeliferous iron. Successively come six articles, a supplementary note to Dr. Faraday's researches in electricity; Mr. Ivory's remarks on the equilibrium of fluids; Mr. Birt's observations on shooting stars, with his table of the constellations arranged according to their relative positions in the heavens. Prof. Schoenbein's letter on the voltaic polarization of certain solid and fluid substances. Mr. Phillips's *desiderata* with respect to the formulæ representing *Chabasie*; and Prof. Sylvester's note on his paper inserted in the preceding number. Of the geological, royal and astronomical societies, the reported "Proceedings" are interesting and valuable: they are followed by eight miscellaneous articles intitled, silicates of soda, respiration of plants, valerianic ether, action of sulphate of ammonia on glass, aconitic acid, separation of copper from arsenic, method of distinguishing strontian from barytes and lime, and instru-

ments for the alleviation of deafness. Then comes the closing meteorological tables and observations.

FEBRUARY.—For the three first articles of this month's publication, you have Major Sabine's comparison of the magnetic lines of no dip and of least intensity, represented on a map; Mr. Watkins on the evolution of heat by thermo-electricity; and M. Leise's preliminary notice of some experiments on the action of acetone on the bichloride of platinum; he obtains a considerable quantity of a substance which he calls *Metacechlorplatin*, by keeping for twenty-four hours a mixture of acetone with the bichloride in a well-closed vessel. Three additional numbers of Professor Johnston's experiments on the composition of mineral substances of organic origin, relate to his analyses of the mineral resins—the Highgate resin or fossil copal; resin from settling stones; and berengelite: he also treats of the origin of the fossil copal, retinasphalt, middletonite, guayaquillite and berengelite. Another portion of Col. Wright's meteorological observations during a residence in Colombia between the years 1820 and 1830, is followed by Mr. Hopkins' extended observations on Malaria, with suggestions for ascertaining its nature. Prof. Forbes communicates his curious experiments on the colour of steam under certain circumstances; and then come three papers on particular demonstration of Euclid: Mr. Drury's notice of the electrical excitation of a leather strap, connecting the drums of a worsted mill; and Mr. Grove's suggestions on the voltaic series and the combination of gases by platinum. After the proceedings of the Royal, Geological, and Cambridge Philosophical societies, there are eight miscellanies and articles of intelligence, with the titles—equivalent of carbon and composition of naphthalin; composition of wax; amilen derived from oil of potatoes; action of chlorine of zinc upon alcohol; action of spongy platina; architectural lectures; French expedition of discovery; and a curious habit of earth-worms. At the end, come the meteorological tables and observations, from which you pass to

THE SUPPLEMENTARY NUMBER, containing a general index to the Philosophical Magazine from MDCCCXXXII to MDCCCXXXVIII, with a title-page, index, and table of contents, for the thirteenth volume thus completed.

MARCH.—Additional facts on the general magnetic relations and characters of the metals, are here adduced by Prof. Faraday: in his experiments, sixteen metals and twenty-two metallic combinations, when cooled to 112° F. gave no indications of any magnetic power. Dr. Kane's notice on the theory of the æthers is followed by a continuation of Mr. Tovey's researches in the undulatory theory of light, on the elliptical polarization produced by quartz, and by Dr. Winn's communication on a remarkable property of arteries, considered as a cause of animal heat. Mr. Grooby then illustrates the passage of the moon across the Pleiades in March, August, September, and November, MDCCCXXXIX, with remarks and a chart. In a further portion of his meteorological observations in Colombia, Col. Wright considers the method of measuring heights by boiling water. Three concise articles next appear,—these are, Mr. Webster's letter on the colour of steam: Mr. Cooper's remarks on hydrocyanic acid; and Prof. Silvester's investigation on the motion and rest of rigid bodies. An interesting paper of Sir David Brewster's on the colours of mixed plates, unfolds his experiments on this curious subject; and, last in the list of originals, you have some account by Mr. Talbot of the art of photogenic drawing, and of the processes employed in its prac-

tical applications: this discovery of Mr. Talbot's seems calculated to secure the highest and most important results. For proceedings of Learned Societies, those of the royal, geological, and astronomical, are recorded; and then come fifteen miscellaneous, chiefly chemical, articles, which are succeeded by the meteorological observations and table.

The Magazine of Natural History, and Journal of Zoology, Botany, Mineralogy, Geology, and Meteorology, conducted by Edward Charlesworth, F.G.S. 8vo, London, 1838-9.

NO. XXIV, DECEMBER, 1838.—Mr. Waterhouse introduces this month's publication with a beautifully coloured figure and description of the *Goliathus torquatus*, a beetle belonging to the cetoniidean family: his specimen was brought from Sierra Leone—where the insect is extremely scarce. In an English version, are M. de Blainville's doubts respecting the class, family and genus to which the fossil bones found at Stonesfield and designated *Didelphis prevotii* and *D. bucklandii*, should be referred: M. de B. who appears to be a doubt-full philosopher, has recently promulgated "new doubts" concerning the same question: his paper is copious and elaborate. Dr. Drummond adds to his notices of Irish Entozoa, a description of the *Anthocephalus paradoxus*, and he illustrates his subject with six very distinct and useful figures. A descriptive list of *Rhysodes* is given by Mr. Newman, and he notes the ranges of its geographical distribution: he characterises eight species—the *Rhysodes strabus*, *R. aratus*, *R. exaratus*, *R. litatus*, *R. costatus*, *R. sculptilis*, *R. guildingii*, and *R. monilis*. In a communication to the editor, Mr. Bradley notes his observations on the habits of the electric eel. Dr. Weissenborn gives an account of the transformation of oats into rye, as a fact attested by experiment; and, with Mr. Ward's notice of the examination of candidates for the botanical prizes proposed by the apothecaries' society, the department for original articles is concluded. Mr. Bowerbank's observations on the lower freshwater formation in the Isle of Wight; Mr. Wetherell's note on the Highgate resin; Dr. Rees' remarks on the existence of flint-beds in the upper chalk formation; Mr. Walker's remark on the geography of insects; and Dr. Weissenborn's of a new German scientific institution, constitute the "short communications," and bring the volume for MDCCCXXXVIII to a respectable termination.

NO. XXV, JANUARY, 1839.—Mr. Charlesworth commences the new year and the new volume of his excellent periodical with an English version of M. Valenciennes' observations on the fossil jaws from the oolitic beds at Stonesfield, named *Didelphis prevotii* and *D. bucklandii*; and, for reasons assigned in the article, he regards these bones as having belonged to mammiferous animals very nearly approaching the *Didelphis*, but of a distinct genus: he prefers the terms *Thylacotherium prevotii* and *T. bucklandii* as their scientific appellations. Mr. Lee contributes an admirable article with the title, "notice of undescribed zoophytes from the Yorkshire chalk, and his descriptions are illustrated by fifteen well executed diagrams: his subjects are—the *Siphonia olava*, *Sl. anguilla*, *Spongia catablastes*, *Sp. fastigiata*, *Sp. sopiaformis*, *Sp. ampulla*, *Sp. spinosa*, and *Udotea cancellata*. Observations on the *Lamellicornus*

of Olivier by Mr. Hope, consist of a tabular view of one hundred and twenty-one species of *Melolontha*, with the "country and arrangement of authors," and of critical and descriptive remarks on fifty-six species of *Melolontha*—the *alba*, *commersonii*, *serrata*, *villosa*, *alopex*, *solstitialis*, *pini*, *oblonga*, *cornuta*, *glauca*, *lutea*, *elongata*, *bimaculata*, *femoralis*, *cærulea*, *cæruleocephala*, *bi-punctata*, *globator*, *rauca*, *rufa*, *errans*, *innuba*, *nitidula*, *aulica*, *gibba*, *versicolor*, *variabilis*, *zebra*, *vittata*, *vulpea*, *crinita*, *proboscidea*, *limbata*, *praticola*, *regia*, *marginata*, *atomaria*, *crassipes*, *podagricus*, *gonagra*, *longipes*, *monticola*, *varians*, *hæmorrhoidalis*, *picipes*, *igneus* and 12-punctata. A description of two new beetles belonging to MacLeay's *Cetonideæ* family, with good illustrative figures, is given by Mr. White, who proposes that *Platyge-ma macleayi* and *Eudibella morganii* may be accepted as the distinctive appellations of his new insects. Mr. Strickland confirms the claims of *Ardea alba*, the great egret or white heron, to be considered a British bird. Remarks on the synonymy of the Perlites, with brief characters of the old, and of a few new species, are advanced concisely by Mr. Newman; he then treats formally of *Eusthenia thalia*, *E. spectabilis*, *Pteronarcys regalis*, *P. biloba*, *P. proteus*, *Perla abnormis*, *P. lycorias*, *P. xanthemes*, *P. bicaudata*, *P. marginata*, *P. cephalotes* and *P. cymodoce*. In the shape of a critical review, you have an account of that portion of Dr. Smith's *Illustrations of the Zoology of South Africa*; and, in this article, the attention of naturalists is directed to the *Cetonideæ* group of insects. Last of all, for January, an extract from Prof. Grant's observations on the footmarks of *Chirotherium* lately detected in the Stourton stone-quarries, instructively occupies the department of scientific intelligence.

No. XXVI, FEBRUARY.—M. de Blainville promulgates, through an English version, his "New Doubts" relating to the *Didelphis* of Stonesfield, and persists in retaining for it the name *Amphitherium* which he originally proposed: he regrets that the scientific conductors of the journal called "the *Athenæum*" should have embarrassed science by facetiously proposing the name "*Botheratiotherium*" for the *Didelphis* of the oolite, as a means of evincing his impartiality! From Mr. Bean's pen, you are provided with a catalogue of the fossils found in the Cornbrash Limestone of Scarborough, with figures and descriptions of some of the undescribed species—as, the *Tubipora incrustans*, *Amphidesma decussatum*, *Sanguinolaria parvula*, *Cardium globosum*, *Isocardia triangularis*, *Anomia semistriata*, *Bulla undulata* and *Littorina punctura*: his figures are beautifully distinct and elegant. Dr. Drummond's notices of Irish Entozoa, on this occasion, extend to the *Echinorhynchus hystrix* and *E. filicollis*, which are admirably figured and described with singular perspicuity. With a few observations on some of the natural objects in the neighbourhood of Cheadle, Mr. Carter adds his mite to the information chiefly on local botany: he discovered the *Valeriana pyrenaica* growing in tolerable abundance, by the side of a stream flowing along the bosom of a ravine, near the village of Oakmoor. Mr. Blyth proceeds with his analytic descriptions of the groups of birds composing the order *Streptopores*: his article is excellent, and embraces the *ZYGODACTYL* *Levirostræ*, consisting of the *Rhamphastidæ* or the toucan family, and the *Musophagidæ* or the toucan and coly family. With observations on his three new genera, *Isogenus*, *Chloroperla* and *Leptoperla*, the monograph of Mr. Newman on the synonymy of the PERLITES with specific characters, is concluded: his species are Iso-

genus *Igea*, *I. nubecula*, *I. frontalis*, *I. micromphala*, *I. infuscatus*, *I. drymo* and *I. clio*; *Chloroperla spino*, *C. grammatica*, *C. transmarina*, *C. clymene*, *C. ephyre*, *C. flava*, *C. apicalis*, *C. cydippe*, *C. bifrons* and *C. opis*; *Leptoperla heroë*, a slender and very elegant insect from Van Dieman's Land. A course of observations on the RODENTIA is here commenced by Mr. Waterhouse, with a view to point out the groups, as indicated by the structure of the Crania in this order of mammals: he regards the zygomatic arch and ant-orbital foramen as affording the most constant characters: he arranges the order into three sections, and names them, *Murina*, *Hystriocina* and *Leporina*; and, in the present communication, under the first section, he treats of the Scuridae as a family, and illustrates its characters with five graphic outlines. For short communications, there are—a note on the *Amphicomma vulpine* a new genus of the lamellicorn group, from W. Florida; a statement on some fossil cetacean remains obtained from the yellow marl of Herne Bay, in Kent; a note on the argonaut; and a set of ornithological remarks recommending the occasional publication of lists of birds shot in different parts of the kingdom, so as to afford a sort of index to collectors: the writer exemplifies his suggestion by enumerating the chief rarities which have come under his own observation.

No. XXVII, MARCH.—Here, a lady contributes the first article: it is furnished by "Madame Jeannette Power," and consists of physiological observations and experiments on the "Poulp of the Argonaut:" the ingenious female naturalist has assured herself that this Mollusc is the constructor of the shell which it inhabits. Mr. Thompson and Mr. Patterson relate their important observations on Snow Crystals, of which nineteen different forms are enumerated; and, for the next communication, you have the first portion of Dr. Bachman's monograph of the genus *Sciurus*, with descriptions of new species and their varieties in N. America: here, the doctor treats chiefly of *S. capistratus*, the fox squirrel, its specific characters, habits and geographical distribution. Another section next appears, of Mr. Garner's essay on the anatomy of the Lamellibranchiate Conchiferous Animals: in this, he notes what is known of the chemical composition of the shells of Bivalves, makes some remarks on the articulation of the valves, and then describes the muscular and nervous systems of the shell-occupying tribes. In his observations on the history and classification of the Marsupial quadrupeds of New Holland, Mr. Ogilby professes to investigate the relations and establish the zoological characters of these interesting animals: his essay abounds with facts and inductions peculiarly deserving the best consideration of naturalists. Two lists of vegetables are furnished by Mr. Pamplin in his remarks on the Botany of Selborne: the first includes the sixteen plants mentioned by Mr. White, "the amiable natural historian of that truly delightful spot:" the other is a catalogue of thirty rarer species of indigenous plants growing near Selborne: the district, he adds, is rich in willows and ferns, which flourish in the deep shady lanes, in wonderful variety and beauty. Mr. Doubleday publishes, in a concise and eulogical article, a complete list of Mr. Thomas Say's entomological writings: twenty-nine of these, with their exact titles and dates of publication, are enumerated. From the pen of Dr. Clarke, you have curious and valuable remarks on *Perdrix rubra* the red-legged partridge, with a copious synonymy. The "Short Communications" contain accounts of a fall of meteorolites and of a singular procession of caterpillars,

a description of the *Lamia lutea* as a new species, and a notice respecting the London Botanical Society, which appears to possess 18,592 specimens of British, and 10,000 of foreign plants: the Council have published a sheet containing the whole of De Candolle's orders and genera, and the Linnean classes and orders, to answer the purpose of arranging British collections.

Annals of Natural History; or Magazine of Zoology, Botany, and Geology; conducted by Sir W. Jardine, Bart., P. J. Selby, Esq., Dr. Johnson, Sir W. J. Hooker, and Richard Taylor, F.L.S. 8vo. London, 1838, with Graphic Illustrations.

No. X. DECEMBER, MDCCCXXXVIII.—First on the list of communications for this number, you have remarks of Mr. Hancock's on the Greenland and Iceland falcons, shewing that they are different species: under the distinctive names, *Falco islandicus* and *F. granlandicus*, he details their specific characters and synonyms. In an article on the land and fresh-water Mollusca of Algiers and Borgia, obtained in May, 1837, Mr. Forbes describes forty-five species, and he believes that several of them were previously undescribed. His collection includes the *Limax cinereus* and two other species to which he has not given names; *Helix aspersa*, *H. melanostoma*, *H. naticoides*, *H. lactea*, *H. constantina*, *H. candidissima*, *H. otthiana*, *H. terverii*, *H. cespitum*, *H. pisana*, *H. variabilis*, *H. pyramidator*, *H. conoides*, *H. conica*, *H. elegans*, *H. rozetti*, *H. lenticula*, *H. lucida*, *H. cellaria*, *H. apicina*, *H. rose-tincta*, and a variety; *Bulimus decollatus*, *B. acutus*, *B. ventricosus*, *B. pupa*, and *B. terverii*, so denominated in honour of M. Terver, of Lyons, an eminent naturalist; *Achatina poireti*, *A. acicula* and *A. nitidissima*; *Succinea amphibia*; *Pupa umbilicata* and *P. granum*; *Cyclostoma sulcatum*; *Paludina acuta* and *P. dupoetiana*; *Ancylus fluviatilis*; *Physa contorta*; *Planorbis metiagensis* and *P. marginatus*; *Melanopsis buccinoidea*, and *Placidium tumidulum*. Mr. Schomburgk, the distinguished South American traveller, furnishes a valuable communication on the *Sarcorrhampus pupa*, king of the vultures; and in this curious article, Mr. S. describes the Zoological characters and animal economy of this "most beautiful of the deformed family of the vultures," from attentive and extended observation. After a careful examination of numerous individuals in their native localities, Mr. Babington concludes that there are four distinct British species of the *Lotus*, which he distinguishes, by full permanent characters, as *L. corniculatus* and four varieties, *L. major*, two varieties, *L. angustissimus*, two varieties, and *L. hispidus*: each of his four species is aptly illustrated with small but distinct figures. Mr. Thompson proceeds with his observations on fishes, containing a notice of one species new to the British, and of others to the Irish Fauna; and, on the present occasion, his subjects are, the *Coregonus clupeoides* and *C. pollan* in a note, *Salmo ferax*, *Anguilla latirostris*, *Exocoetus*, an unnamed species of flying fish, *Raniceps trifurcatus*, *Pleuronectes punctatus*, *Mustelus lavis*, *M. hiemalis*. Mr. Hindmarsh's remarks on the wild cattle of Chillingham Park include a letter from Lord Tankerville on the same subject, with notes on the breed at Chartley and those of the ancient Caledonian forests. Next in course, come two papers from Mr. Gray; and in the first, he contributes brief

notes and two plates on some new or little known mammals, as the *Bos brachyceros*, *B. pegasus*, *Pteroneura sanbachii*, *Viverra carcharias*, *Amphisorex pennantii* and *A. linneana*; in the second, he continues his catalogue of the slender-tongued Saurians, with descriptions of many new genera and species: in this list he indicates characteristically the *Scincus officinalis*, *Sphzenops sepsoides*, *Celestus striatus*, *Tachydosaurus rugosus*, *Egernia cunninghami*, *Tiliqua whitii*, *T. elegans*, *T. cyanura*, *T. chinensis*, *T. tenuolata*, *T. labillardii*, *T. vanicoriensis*, *T. bistrigata*, *T. punctata*, *T. maculata*, *T. fasciata*, *T. carinata*, *T. subrufa*, *T. affinis*, *T. quinquestriata*, *T. napoleonis*, *T. nigrolutea*, *T. kingii*, *T. bibronii*, *T. capensis*, *T. ascensionis*, *T. tenuis*, *T. stoddarti*, *T. ocellatus*, *T. leucopis*, *T. australis*, *T. buehanami*, *T. trilineata*, *T. ocellatus*, *T. similis*, *T. bellii*, *T. erythrocephala*, *T. ocellata*, *T. richardi*, *T. duperreyi*, *T. entrecas leaux*, *T. microcephala*, *T. anea*, *T. albolabris*, *T. revoisii*, *T. sloanii*, *T. striata*, *T. jamaicensis*, *T. fernandi*, and *T. interrupto-punctata*. There is only one proceeding of the Zoological society, and for Miscellanies, you have Mr. Gray's observations on *Hapalotis albipes*, the New Holland Gerboa rat; on the *Lepidosiren paradoxa*, a new anomalous reptile; on the fur seal of commerce; and on the habits of *Arion ater*, the black slug; and Mr. Hancock's communication on the *Regulus modestus*, which he proves to be a British bird: the "December" closes with meteorological observations and tables.

NO. XI, for JANUARY, MDCCCXXXIX.—Mr. Pictet opens the first number for the present year with a sort of eulogistic estimate of the writings of Goethe relative to natural history: these, it seems, had comparative anatomy, botany and geology for their object; but Mr. P. confines his observations to the first, as being the part which he can best appreciate. Notes on Shrews brought from Germany by Mr. Ogilby, including the description of an apparently new species, come from the hand of Mr. Jenyns: they are five in number—the *Sorex araneus*, *S. leucodon*, *S. tetragonurus*, *S. labialis*, and *S. pygmaeus*: the *Labiosus*, or full-lipped, is considered new, and the name bears reference to its most distinguishing peculiarity. After these notes, you have a description of two new Orchideous plants, by Prof. Hooker: these are, the *Pleurothallis aristata* and the *Stellis foliosa*: the specific characters are illustrated with figures. Continuing his catalogue of the slender-tongued Saurians, Mr. Gray describes the *Dasia olivacea*, *Aprasia pulchella*, *Herinia capensis*, *Riopa punctata*, *R. ruppellii*, *R. brongniavillii*, *Lygosoma abdominalis*, *L. anstralis*, *Chamela lineata*, *C. duvancellii*, *Tetradactylus decresiensis*, *Ristella ruckii*, *Hagria rosmaerii*, *Seps tridactylus*, *S. vittata*, *S. multivirgatus*, *Siaphos equalis*, *Ophiodes striatus*, *Anguis fragilis*, *Signana ottonis*, *Dorfia punctata*, *Microlepis undulata*, *Ablepharus panonicus*, *A. cuspeus*, *Gymnophthalmus lineata*, *Cryptoblepharus leschenaultii*, *C. paucilopleurus*, *Lerista lineata*, *Rhodona punctata*, *Soridia lineata*, *Nessia burtonii*, *Evesia monodactylus*, *Bipes anguineus*, *B. gronovii*, *Acontias meleagris*. Mr. Thompson furnishes an excellent historical article on the breeding of *Scolopax rusticola*, the woodcock, in Ireland, including valuable accessory observations. In a communication on the botany of the Channel Islands, Mr. C. C. Babington enumerates those plants which had not been noticed in that locality before 1838: their names are, *Ranunculus ophioglossifolius*, *Orchis lasiophora*, *Linaria pelisseriana*, *Myriophyllum alterniflorum*, *Polygala oxypetala*, *Ononis reclinata*, *Potamogeton plantaginifolius* and *Carex punctata*; he adds a list of five species found in these islands, but not found in Britain:

they were first gathered by himself, and are the *Neottia astivalis*, *Sinapis incana*, *Mercurialis ambigua*, *Atriplex rosea*, and *Anthrobium ebracteatum*: he states, that 700 flowering plants and ferns have been noticed in these islands, and that twenty of them have not as yet been gathered in Britain by her numerous practical botanists: Mr. B. is about to publish *Primitæ Flœe Sarnicæ*, and solicits information on the subject. Mr. Walker, on resuming his descriptions of the British Chalcidites, produces the characters of nine species, the *Cirr.....cyrrhus*, *C. mycerinus*, *C. adanæ*, and three varieties, *C. orithyia*, with two varieties, *C. tachos*, *C. attalus* and ten varieties, *C. agathodes* with five varieties, *C. julis* and the *C. ithyia*, which stands as the forty-fourth article on the list. Another addition to the Specimen of New Zealand Botany is contributed by Mr. Cunningham, and here he characterizes eleven species—the *Quintinia serrata* with an interesting foot-note, the *Weinmannia fascioides*, *W. sylvicola*, *Leiospermum racemosa*, *Ackama rosafolia*, *Tillæa verticillaris*, *Mesembryanthemum australe*, *Tetragonia expansa*, *Passiflora tetrandra* and the *Sicyos australis*: from the precision with which the different habitates of the plants are particularized by Mr. C. his catalogue will greatly facilitate the researches of future naturalists. Under the title of Information respecting Botanical Travellers, you find that Dr. Steudel is successfully prosecuting the objects of his mission in Abyssinia, where he has already collected 50,000 dried specimens of plants, consisting of 600 species, many of which are new: that Dr. Brunner has returned to Berne from the Cape de Verd islands with a collection of 600 species of plants which he offers to the attention of botanists at forty shillings a hundred: and that Mr. Gardner is proceeding prosperously and zealously in his investigation of the Brazilian botany. Seven concise Bibliographical Notices bring you to the proceedings of the Royal, Linnæan, Wernerian, and Zoological societies. For Miscellanies, you have two extracts from Couch's Fauna of Cornwall—on the *Larus jacksonii*, a new species of gull, and on *Cyclopterus coronatus*, the coronated lump-fish, with sketches of the specific characters;—an intimation of the complete failure of the French expedition of discovery to the South Polar Seas;—and a notice, by Prof. Hooker, of a very remarkable state of *Viola lactea*, the cream-coloured violet. Last on the list, stand the monthly meteorological observations and tables.

No. XII.—This number of the Annals begins with Mr. Harvey's descriptions of two new species of a new genus of South African plants belonging to the natural order Rhizanthææ, with two illustrative plates: he suggests the term *Mystropetalon* for the appellation of the genus, from the spoon-shaped form of the segments of the perianth: the species are *M. thomii* and *polemanii*, and he gives distinct characters of these interesting plants. In Mr. Newman's paper on the synonymy of *Passandra*, he characterises all the old and a few new species.—*P. sesstriati*, *P. columbus* and *P. fasciata*; *Hectarthrum curtipes*, *H. gigas*, *H. brevifolium*, *H. trigeminum*, *H. heros*, *H. bistriatum*, *H. gemelliparum*, *H. semifusum* and *H. rufipenne*; Catogenus *carinatus*, *C. castaneus*, *C. rufus*, and *C. puncticollis*. Mr. Giraud's observations on the existence of a third Tunic, together with certain other peculiarities, in the structure of Pollen, with a graphic illustration, exhibiting fourteen well-sketched figures. Mr. Thompson makes a valuable communication on the British species of the genus *Monochirus*; on a minute fish allied to the *Ciliata glauca* and *Gadus argenteolus*; on the identity of *Trigla cuculus* with

T. gurnardus, with remarks on two species of *Gobius*; on the identity of *Crenilabrus multidentatus* with *Labrus pusillus*; and on the Irish *Coregonus chupeoides* and *C. pollan*, with exact figures. The sixth section of Dr. Johnston's "*Miscellanea Zoologica*" contains his observations on the British Aphroditaceæ: his subjects are, *Aphrodita aculeata*, *Polynoe squamata*, *P. cirrata*, *P. impar*, and *P. viridis*, *Pholoë inornata* and *Sigalion boa*, with three plates, on which the chief characteristics of each animal are represented on three plates with numerous figures. Commencing with No. 37 of the plants collected by Mr. Schomburgk in British Guiana, Mr. Bentham enumerates the *Leria nutans*, *Porophyllum latifolium*, *Baccharis erioptera*, *Schultesia stenophylla*, *S. brachyptera*, *Contoubea spicata*, *C. reflexa*, *Schuebleria tenella*, *S. coarctata*, *Lisianthus uliginosus*, *L. ohelonioides*, *Irlbachia cœrulescens*, *Bacopa aquatica*, *Herpestris sessiliflora*, *Beyrichia ocinoides*, *Conobea aquatica*, *Vandellia crustacea*, *V. diffusa*, *Torenia parviflora*, *Buchnera palustris*, *B. lavandulacea*, *Scoparia dulcis*, *Gerardia hispidula*, *Glossostyles aspera*, *Hypitis recurvata*, *H. paludosa*, *H. lantanaefolia*, *H. brevipes*, *H. parkeri*, *H. pectinata*, *Marsypianthus hyptioides*, *Cryptocalyx nepetaefolia*, *Lippia microphylla*, *Lantana salviaefolia*, *L. annua*, *Camara thiaefolia*, *Stachytarpheta elatior*, *S. cajenensis*, *Tamonea spicata*, *Petrea macrostachya*, *Pyrostoma tornatum*, *Vitex capitata*, *V. umbrosa*, *Egiphilla arboreescens*, *E. laxiflora*, *E. sahularis*, *Clerodendron fragrans*, *Amasonia erecta*, and *A. hirta*. Prof. Fries' account of a metamorphosis observed in *Syngnathus lumbriciformis*, the small pipe-fish, with two figures, is a curious contribution to ichthyology. The information respecting botanical travellers brings you to the end of this month's publication, and is completed in

No. XIII. A SUPPLEMENTARY NUMBER. Mr. Gardner relates his proceedings at Pernambuco, and Mr. Harvey gives his from Southern Africa; under this head of "Information," which precedes three bibliographical notices, the proceedings of the Zoological and Wernerian Societies, and six miscellanies intitled, on the fur-seal of commerce; a curious habit of earth-worms; the occurrence of *Atriplex rosea* on most of the English coasts; the animal of *Modiolus discrepans*; the *Vespertilio leisleri*; and a note on the botany of the Channel Islands. The volume then finishes with Meteorological observations and tables, and nine plates with figures for illustrations.

No. XIV.—Professor Morren introduces this month's contributions to natural history with a valuable essay on the "Production of Vanilla in Europe;" and his observations are divided into five sections, with the titles—of the species of Vanilla plant which produces the long and fine pods of commerce; an abstract of the history of the *Vanilla planifolia*, bearing large odoriferous fruits; a short digression on the introduction of Vanilla into domestic use; a detailed description of its cultivation; and remarks on the structure of this plant: the professor is certain that the *V. planifolia* is the same plant which is generally cultivated on the continent, and has produced at Liège an abundant crop of odorous and delicious fruit. Mr. Beyrich's memoir on the *Goniatis* found in the Transition Formations of the Rhine, exhibits the geological descriptions of *Ammonites subnautilus*, *A. lateseptatus*, *A. danenborgi*, *A. compressus*, *A. retrocurvus* and *A. becheri*, with illustrative figures. In a brief article on some new and rare Indian plants, Dr. Arnott describes the *Schirostigma hirsutum*, *Acranthera ocylicica*, *Neurocalyx wightii*, *W. crylanicus*; he characterises the *Argosternum courtallense*, in a foot-note. Ten

Reptiles and eighty-two Fishes are noted in a new portion of Mr. Eyton's attempt to ascertain the Fauna of Shropshire and N. Wales; and, in an additional piece of his specimen of the New Zealand botany, Mr. Cunningham particularises twenty-seven species, making 552 the number of his catalogue. From Mr. Thomson's pen, there is an interesting paper on an apparently undescribed species of *Lepadogaster*, which he denominates *L. cephalus*, and on the *Gobius minutus* of Muller, and *Cyclopterus minutus* of Pallas, which the writer considers as the young of *Cyclopterus lumpus*, with much appearance of certainty. Over five bibliographical notices, you pass to the proceedings of the Linnæan, Geological and Zoological Societies, and of the Royal Irish Academy. For Miscellanies, there is a note on the genus *Syngnathus*; then comes a report on the influence of native magnesia on the germination, vegetation and fructification of vegetables, and then the meteorological tables and observations.

The Naturalist; illustrative of the Animal, Vegetable, and Mineral Kingdoms. with engravings; edited by Neville Wood, Esquire; royal 8vo. London, 1838-9.

No. XXV, OCTOBER.—Mr. Drosier takes the precedence in this month's publication, with "interesting notes" on the habits of the *Gasterosteus trachurus*, or rough-tailed tickleback, in Russia; and, next in course, come Mr. Buist's observations on certain singular phenomena connected with the deposition of mind in the river Tay. In a conversational sort of speculation on the abuse of prints in works of natural history, we are edified by an exposition of the notions of Mr. Rylands on that recondite subject. The next seven pages of his own periodical are occupied by a characteristic exhibition of Mr. Wood's sentences under the words "Gould's Birds of Europe;" and this is followed by Mr. Hall's on the habits and peculiarities of British plants, and on the derivations of their Latin names. By way of "correspondence," you have Mr. Bensted addressing the "Editor of the Naturalist" on the destruction of game by rats, on the necessity of freedom in scientific inquiry, and on the destruction of foliage by insects; and then you arrive at the Editor's affable reply, wherein he professes the magnanimity of advocating the cause of truth apart from all mercenary considerations! For a "chapter of criticism," there are an apparent confirmation of Mr. Buist's statement that *Columba palumbus*, the ring-pigeon, eats the bulbs of turnips, and Mr. Rilands' question "Is *Papilio podalirius* a British insect," with his avowal that he feels inclined to retain himself as special pleader in favour of its claims to be ranked as one of the British butterflies. From this instructive chapter, you pass on to a memoir of Dr. Latham, whom all the world knew "almost exclusively as an ornithologist:" this remarkably modest and philosophical compilation is enriched with a portrait of the Doctor, and with an epistle indited by him in the *ninety-sixth* year of his age, for the seeming purpose of saying that the book on the "British Song Birds" is a very interesting book, and particularly adapted to charm as well as to enlarge young minds! The section composed of some of the Proceedings of the British Association, and of the geological, royal, horticultural, and entomo-

logical societies, precedes those which are denominated extracts from foreign journals, reviews of new publications, literary intelligence, chapter of miscellanies and obituary—all deserving their due meed of praise from enlightened naturalists.

XXVI, NOVEMBER.—First here comes the first epistle of Edwin Lees, F. G. S. to Neville Wood, Esq. on local occurrences in natural history: this lucubration will furnish the phrenologist with more than one of those facts which are not fancies. Ranking next after the first of Mr. L.'s letters, stands a tale about toes by Mr. Allis, who intitules it—on the toes of the African ostrich, and the number of phalanges on the toes of other birds; and then Mr. Pigott appears with his notes on the domestic habits of the dormouse. Mr. Rylands propounds some observations on the classification of the Adepagous insects, and the arrangement adopted by him will secure the attention of "practical naturalists," but it may be seized as a confirmatory repudiation of their shallow impudence, who effect to despise classical learning. A voyage across the North and Baltic seas, by Mr. Drosier, transports you to the "Correspondence" on a venerable elm, which is well figured, on the spring of 1838, and on a supposed variety of the blind-worm. The British Association's zoological and botanical "Proceedings" occupy a respectable portion of the journal; they are followed by a botanical "proceeding" of the Rochdale literary and philosophical society; and this No. closes with a brief "chapter of miscellanies" in zoology, botany, and geology.

XXVII, DECEMBER.—Mr. Buist's natural history of the *Polyommatus Artaxerxes*, confers on this number an agreeable and entertaining introduction: the insect is peculiar to the Scottish division of our island, and Mr. B. distinguishes the localities frequented by the "beautiful little Artaxerxes," adding the specific characters by which it may be known. There stands next an account of a visit to the British Association at Newcastle, by a member, who here most glibly pours forth a splenetic and presumptuous effusion. From the effects of this, however, you may be relieved by Mr. Wood's "most candid and praise-worthy" analysis of Gould's Birds of Europe, among which the facetious "practical naturalist" invents opportunities of practising his characteristic gambols. Mr. Lankester follows his friend with the conclusion of remarks on the general structure and habits of invertebrate animals, with poetical decorations; and, in his train, Mr. Hall arrives with another of his pieces on the habits and peculiarities of British plants, and on the derivations of their Latin names. In a sketch and picture for the "Naturalist's Literary Portrait Gallery," Dr. Bevan is beautifully eulogized, and his "Honey Bee" is sweetly lauded as a most perfect and philosophical manifestation of "apiarian lore;" and this brings you to the "correspondence" between two of his correspondents and the editor, who, as usual, is abundantly complaisant: the subjects are brief and becoming—birds' nests and books on natural history. Next, there are notes for proceedings of eight natural history societies, with twelve little "extracts from foreign periodicals;" and forthwith, over the "reviews of new publications," you pass to the "chapter of miscellanies," which bring the Naturalist to the conclusion of MDCCCXXXVIII.

XXVIII, JANUARY.—Dr. Hibbert has given value to this number by his notes and figures concerning the *Mucor hyphæus*, a new parasitic plant,

found growing on the fruit of *Crucifera thebaica*, or *dowm*, the Thebaic palm, in Upper Egypt: it is characterized in an additional note by Mr. Berkeley to the editor. In a longish outline of the comparative structure of the skeletons of zoophytes, Mr. Wright produces a respectable display of "Greek and Latin" lore—the much-despised "Greek and Latin" lore! Then you have a page on a gigantic fossil fucus discovered in the new red sandstone at Woodside, in the river Mersey, from the pen of Mr. Duyer; then two pages from Mr. Hall, under the title, botanical notes, principally from the herbarium of the Liverpool botanic gardens; and then comes one of the sketches which Mr. Wood denominates a review of Gould's Birds of Europe. Mr. Hall's compilation on the habits and peculiarities of British plants, and on the derivation of their Latin names, is continued, and conducts you to the "correspondence," which is made up of a complaint by Mr. Hall, connected with "the departure of swallows in 1838;" and of seven samples of gossiping, addressed to the editor by Mr. Pigott, without the "use of apologies." The "chapter of criticism" comprizes a lumpish tissue of fantastical and dogmatic jargon "on the medium of mental power in man and all other animals;" and a query respecting Bohler's "*Lichenes Botanici*," to which the editor "anticipates the reply." The proceedings of seven societies—the zoological, medico-botanical, botanical, Linnæan, Worcester natural history, Liverpool royal, and the St. Andrew's literary and philosophical—are compendiously noted; and over the reviews of new publications and literary intelligence, you may advance to the chapter of miscellanies, and be amused with a medley of extracts from the pages of obsolete newspapers.

BOOKS RECEIVED.

DR. JONES' Lecture on the Study of the Greek and Latin Classics.—MR. SMART'S Beginnings of a New School of Metaphysics.—MR. JACOB JONES' "Cathedral Bell," a tragedy.—MR. JACOB JONES' "Spartacus, an Historical Tragedy."—Annals of Natural History, for December, January, February, and March.—Philosophical Magazine, for December, January, February, and March.—Magazine of Natural History, for December, January, February and March.—Naturalist for October, November, December, and January.—British and Foreign Medical Review, by JOHN FORBES, M.D., F.R.S. and JOHN CONOLLY, M.D. for October and January.

METEOROLOGICAL REPORT.—NOVEMBER.

Philosophical Institution, Birmingham.

Nov.	9 o'clk a.m.		3 o'clk p.m.		Dew Point, deg. Fahr. 9 a.m., 3 p.m.	External Thermometers, Fahrenheit 9 a.m., 3 p.m.		Rain in Inches, read off at 9 a.m.	Direction of wind at 9 a.m.	Remarks.
	Bar.	Ther.	Bar.	Ther.		9 a.m.	3 p.m.	9 a.m.		
1	28.92	48.0	28.83	49.0	43.5	47.5	47.0	.070	S.S.W.	Cloudy a.m.; a hail-storm before 1 p.m.; a fine evening.
2	28.77	45.0	28.72	45.0	39.0	43.5	43.5	.035	S.S.W.	Fair 9 a.m.; rain towards 11 a.m.; continuing with little intermission all day.
3	28.93	43.0	28.74	44.0	38.0	43.0	34.0	.160	S.	Clouded a.m.; rain p.m.
4	28.34	45.5	28.34	49.0	44.0	48.0	41.5	.210	S.S.E.	Clouded, but fair, a.m.; rain p.m.; at ½ past 3 p.m. the wind changed from [S. to N.W., and immediately it began to rain.
5	28.71	47.5	28.84	49.0	44.0	44.0	46.5	.125	W.N.W.	Clouded, but fair.
6	29.7	45.0	29.66	48.5	38.0	40.0	47.5	.360	W.S.W.	A fine morning; fair all day; heavy rain at night.
7	28.98	51.0	28.99	53.0	52.0	54.0	55.0	.150	S.S.E.	Fair a.m.; much wind from the S.E., greatest force 1½ lbs. at 3¼ hrs. p.m.; [heavy rain at half past 4 p.m.
8	28.93	49.5	28.97	51.5	45.5	47.5	49.5	.015	S.	Very fair.
9	28.85	49.0	28.88	51.0	43.0	43.0	48.0	.030	S.W.	Overcast 9 a.m.; very fair.
10	29.17	45.0	29.22	45.5	41.5	39.0	38.5	.015	S.W.	Overcast a.m.; rain p.m.
11	29.64	43.0	29.69	45.0	35.0	34.0	31.5	.030	S.S.E.	Misty 9 a.m.; very fair.
12	29.66	41.0	29.73	43.0	33.0	35.5	41.5		N.W.	A hoar frost; very fair all day.
13	29.91	40.0	29.88	42.0	33.5	34.5	41.0		W.N.W.	A hoar frost; very fair; a dense fog after sunset.
14	29.76	38.5	29.64	40.5	30.0	36.0	41.0		E.	A hoar frost; overcast p.m.; foggy towards evening.
15	29.41	41.0	29.31	43.0	36.5	41.0	36.0	.005	S.	A dense mist, continuing all day.
16	29.2	43.5	29.18	45.0	35.0	38.0	46.5	.005	S.	A fine evening; hazy p.m.
17	29.22	46.0	29.26	47.5	40.0	39.0	45.0	.270	S.S.E.	Very fair, a.m.; overcast p.m.; rain from 4¼ hrs. a.m. of the 18th.
18	29.2	45.0	29.24	45.5	41.0	38.5	40.5	.270	N.N.E.	Rain, while the dew point was taken, at 9 a.m.; continuing all day.
19	29.16	44.0	29.05	43.5	37.5	37.0	34.5	.445	N.E.	Rain or sleet without intermission all day.
20	29.19	41.5	29.2	42.0	35.0	36.5	33.5	.240	N.E.	Overcast, but fair all day.
21	28.99	40.5	28.9	40.5	35.0	36.5	34.0	.055	N.E.	Overcast all day; rain at night.
22	28.81	42.0	28.77	43.0	37.0	38.0	41.0	.115	N.	Light rain, nearly all day.
23	29.04	44.0	29.06	44.0	41.5	41.0	38.0	.005	N.E.	Overcast, but fair.
24	29.64	41.5	29.2	41.0	32.0	33.0	35.0	.005	N.	Cloudy, all day.
25	29.36	37.0	29.35	37.0	26.0	31.5	32.5	.350	E.	Very fair.
26	28.92	34.0	28.7	35.5	31.0	32.5	30.0	.420	E.	Morning fair; p.m. rain and sleet with little intermission, a brisk E. wind [4 lbs. pressure.
27	28.49	38.0	28.0	38.0	36.5	37.0	46.0	.350	E.	Stormy all day; much wind from the S.E., gr. force 23 lbs. at ½ past 2 a.m. (29)
28	27.97	45.5	28.0	48.0	44.5	48.0	45.0	.380	S.E.	Stormy all day; much wind from the S.E., greatest force, 21 lbs. at 20 min.
29	28.36	47.0	28.32	49.0	45.0	50.0	44.0	.380	S.S.W.	Fair a.m.; light rain p.m.; a beautiful evening.
30										[past 2 p.m.
Month	28.22	43.43	29.02	44.81	38.10	39.36	37.02	46.30	3.146	Sum.

Height of the station of the barometer above the ground, 230 ft. 6 in.

Height of the station of the barometer above the presumed mean level of the sea, 472 ft. 6 in.

Dec.	9 o'clock a.m.		3 o'clock, p.m.		Dew Point, deg of Fahr.		External Thermometers. Fahrenheit.		Self-register. Lwt. Hst.		Rain in Inches, read off at 9 a.m.	Direction of Wind at 9 a.m.	Remarks.
	Bar.	Achd. Ther.	Bar.	Achd. Ther.	9 a.m.	3 p.m.	9 a.m.	3 p.m.	9 a.m.	3 p.m.			
1	28.94	47.5	28.9	49.0	43.5	47.0	46.0	49.0	45.0	50.0	.010	S.	Fair a.m.; rain p.m.; a gale from the S.E., 7 lbs. force 5 1/2 p.m.
2	28.81	50.0	28.84	51.0	47.0	48.0	48.0	49.0	47.0	51.5	.215	S.S.E.	Very fair a.m.; rain p.m.; gale continuing, force at 12 (noon), 9 lbs.
3	28.85	47.0	28.85	49.0	44.0	43.0	44.0	46.5	41.5	50.0	.080	S.S.E.	Fair a.m.; light rain after.
4	28.81	46.0	29.06	47.0	41.0	40.0	41.0	45.0	40.0	46.0	.035	S.	Very fair; a slight deposition at night.
5	28.3	44.5	29.45	46.0	41.0	42.0	43.0	43.0	38.0	46.0	.005	W.N.W.	Very fair; a slight deposition at night.
6	28.7	43.0	29.7	43.5	33.5	39.0	33.5	41.5	32.0	42.5	.005	S.S.W.	Fair a.m.; rain after sunset.
7	29.74	46.0	29.77	46.5	44.0	43.0	45.0	45.0	41.0	46.0	.005	W.N.W.	Very fair.
8	29.86	42.5	29.88	44.0	36.0	37.0	36.0	41.5	35.0	43.5	.005	W.N.W.	Very fair.
9	29.88	40.5	29.88	40.0	34.5	36.5	34.5	38.5	33.0	39.5		W.N.W.	A dense fog, continuing all day.
10	29.73	39.5	29.69	40.5	34.0	37.0	34.5	38.0	31.5	40.0		W.S.W.	Fair a.m.; overcast p.m.; light rain at night.
11	29.76	43.0	29.79	44.0	41.0	40.0	41.5	42.5	36.0	43.5	.020	W.N.W.	Very fair.
12	29.77	44.5	29.75	45.0	41.0	43.0	42.0	45.0	39.5	45.5		S.	Very fair.
13	29.77	45.0	29.77	46.5	42.5	42.0	43.0	45.0	42.0	46.0		S.S.W.	Very fair.
14	29.89	45.5	29.85	47.0	43.0	45.0	43.0	45.0	42.0	47.0		N.W.	Fair a.m.; overcast p.m.
15	29.83	45.0	29.81	46.0	40.0	41.0	40.0	40.0	39.0	42.0		S.E.	Very fair.
16	29.1	40.0	29.8	38.5	29.0	29.0	28.5	28.5	25.0	30.5		N.N.W.	A dense fog, with hoar frost, continuing all day.
17	29.81	38.5	29.28	38.0	32.0	31.5	33.75	32.5	27.5	34.0		S.E.	Overcast all day.
18	29.74	36.5	29.71	38.0	30.0	31.0	32.0	35.0	30.0	36.0		E.S.E.	A fine morning; fair, but overcast p.m.
19	29.72	36.5	29.58	38.0	31.5	34.0	31.5	34.0	30.0	35.0	.055	S.S.E.	Very fair; rain during the night.
20	29.57	39.0	29.71	41.0	40.5	41.0	39.0	40.0	31.0	41.0	.235	S.S.E.	Rain at 9 a.m.; showery all day.
21	29.77	41.0	29.75	41.0	34.0	34.5	34.0	33.5	33.0	34.0	.040	S.E.	Overcast 9 a.m.; continuing so all day.
22	29.51	41.0	29.49	42.5	36.5	40.0	36.0	40.0	33.0	40.5	.040	S.E.	Misty a.m.; overcast p.m.; rain at night.
23	28.98	43.5	28.87	45.0	42.0	38.0	41.5	37.0	40.5	40.5	.130	S.E.	Overcast all day, with a slight deposition of rain.
24	28.81	45.0	28.83	45.0	42.0	38.0	41.5	37.0	40.5	40.0	.040	N.N.E.	Rain 9 a.m.; clouded all day.
25	29.2	41.0	29.33	42.25	32.0	30.5	29.5	36.0	32.0	35.0	.025	N.N.W.	Very fair.
26	29.29	37.5	29.06	37.0	27.5	36.0	29.5	36.0	26.0	37.0		S.S.E.	A fine morning; snow and rain p.m.
27	29.13	38.5	29.22	40.5	36.0	37.0	38.0	41.0	35.0	42.0	.285	W.S.W.	Very fair all day.
28	29.57	39.0	29.73	41.0	39.0	38.0	37.5	41.5	35.0	42.5		W.S.W.	Very fair.
29	29.58	40.5	29.57	43.0	39.5	43.0	40.5	45.0	34.0	46.0	.075	S.S.E.	Rain a.m.; overcast p.m.
30	29.5	46.0	29.43	48.5	46.0	48.0	47.0	51.5	45.0	52.0	.010	S.	Overcast, a.m.; rain p.m.; a brisk S. wind.
31	29.91	42.0	29.98	43.0	33.0	39.0	36.5	40.5	35.0	41.0	.045	S.W.	Very fair.
Mean 29.50 42.44 29.40 43.40 37.08 39.05 38.64 40.08 35.91 42.35 34.0 Sum.													

Height of the cistern of the barometer above the ground, 23 ft. 6 in.
 Height of the cistern of barometer above the presumed mean level of the sea, 47 ft. 6 in.
 Height of the external thermometers above the ground, 5 ft. 6 in. S. side.

JANUARY.

Jas.	9 o'clk. a.m.		3 o'clk. p.m.		Dew Point, deg. Fahr. 9 a.m. 3 p.m.	External Thermometers. Fahrheit. 9 a.m. 3 p.m.		Rain in Inches, read off 9 a.m.		Direction of Wind at 9 a.m.	Remarks.
	Bar.	Ther.	Bar.	Ther.		9 a.m.	3 p.m.				
1	28.72	42.5	28.6	46.0	40.0	44.0	47.0	37.0	48.0	S.W.	Very fair; a brisk S.W. wind; greatest force, $\frac{1}{4}$ bef. 1 a.m. (3) 12 pounds. [at night.
2	28.52	44.0	28.52	45.0	38.0	42.5	44.5	42.0	45.0	W.S.W.	Very fair.
3	28.38	45.5	28.23	47.0	41.0	42.5	48.0	38.5	48.5	S.S.W.	Very fair; brisk wind from the S.W., grt. force $9\frac{1}{2}$ lbs. at $\frac{1}{4}$ bef. 8 p.m.; rain
4	28.94	44.0	28.01	47.0	37.0	36.0	39.0	40.0	43.5	S.	A fine morning; overcast, with a sprinkling of snow p.m.; grt. force of the
5	28.08	40.0	28.00	40.0	34.0	35.5	34.0	35.5	31.5	S.	Snow a.m.; overcast p.m.; a fine clear evening. [wind, 7 lbs. $\frac{1}{4}$ bef. 12 p.m.
6	28.14	38.0	28.09	37.0	30.0	33.0	31.5	33.0	35.0	S.	A fine morning; snow and sleet p.m.; a gale from the S.S. grt. force $\frac{1}{4}$ past
7	28.43	41.5	28.5	43.0	33.0	31.0	43.0	37.0	43.0	S.S.W.	Gale cont., grt. force $\frac{1}{4}$ p. 9 a.m. 22 lbs.; snow at night. [4 a.m. (7) 28 $\frac{1}{2}$ lbs.
8	28.98	38.0	28.98	38.0	24.0	30.0	28.5	37.0	38.0	S.W.	Fair; snow at night.
9	28.24	37.5	28.4	38.0	30.0	30.0	33.0	29.0	33.5	W.	Very fair.
10	28.64	36.0	28.62	40.0	38.5	33.5	39.5	28.0	40.0	S.	Fair; a brisk S. wind $7\frac{1}{2}$ lbs. on the square foot.
11	28.5	44.0	28.45	47.5	48.0	46.5	46.0	50.5	51.0	S.S.E.	Overcast, but fair; rain at night.
12	28.64	48.0	28.67	48.0	43.0	38.5	44.0	44.5	46.0	S.W.	Very fair; gale from S.W. at $\frac{1}{4}$ bef. 11 p.m.; grt. force 11 lbs. on S. ft. at 5 m.
13	28.4	48.0	28.38	49.5	46.0	48.0	50.0	40.0	51.0	S.W.	Gale cont., force 5 min. bef. 10 a.m. 10 lbs., overcast, a slight deposition of rain.
14	28.38	46.0	28.27	46.0	41.0	42.5	42.0	41.0	43.5	S.W.	Fair a.m.; overcast p.m.; rain night; W.S.W. wind, gr. fr. 10 lbs. 5 a.m. (15)
15	28.36	40.5	28.32	43.0	31.0	37.0	36.5	38.0	42.0	W.S.W.	Gale continuing; highest force 9 lbs., at 20 min. past 1 p.m.; snow at night.
16	28.49	39.5	28.43	40.0	34.0	32.5	34.0	36.0	37.0	W.S.W.	Very fair; (frost).
17	28.58	36.5	28.6	37.0	26.5	29.5	33.5	28.0	35.0	W.	Very fair; overcast p.m.; rain at night.
18	28.65	36.0	28.6	36.5	27.5	29.0	33.5	28.0	35.0	S.	Rain a. m., with a brisk wind; fair p.m.
19	28.93	41.0	28.05	42.5	43.0	38.0	44.0	41.0	46.0	S.W.	Fair a.m.; overcast with rain p.m., continuing all night.
20	28.4	41.0	28.4	42.0	36.0	40.5	40.0	41.0	45.0	W.N.W.	Overcast, but fair; frost, at night.
21	28.16	46.0	28.23	45.0	44.0	40.5	45.0	40.5	45.0	W.N.W.	Very fair.
22	28.06	40.0	28.77	41.0	31.0	31.0	31.0	36.0	39.0	W.N.W.	Very fair.
23	28.02	39.0	28.02	40.0	31.0	31.0	32.5	36.0	37.0	W.S.W.	Very fair; light rain during the night.
24	28.0	39.5	28.94	43.0	36.0	39.0	38.5	45.0	46.0	W.S.W.	Overcast a.m.; fair p.m.; a gale from N.W. gr. fr. 10 min. past 11 a.m. 10 lbs.
25	28.6	43.0	28.52	44.5	43.5	38.5	44.5	42.0	44.5	N.N.W.	Fair a.m.; overcast p.m.; with snow and sleet.
26	28.72	40.5	28.72	41.0	32.5	35.0	33.5	35.0	36.0	N.N.E.	Fair a.m.; overcast p.m.;
27	28.88	38.0	28.8	38.5	26.0	31.5	33.0	28.0	35.0	W.	Very fair a.m.; a sprinkling of snow at night.
28	28.65	37.0	28.36	37.5	29.0	26.5	32.0	34.0	32.0	W.S.W.	Fair a.m.; snow p.m.; a brisk S.W. wind, force 7 lbs. 10 min. past 3 p.m.
29	28.07	36.5	28.8	38.0	30.5	36.0	33.5	36.5	37.0	S.W.	Snow; a brisk S.W. wind, gr. fr. at 20 min. bef. 10 p.m.; 7 lbs.
30	28.75	34.0	28.81	35.5	21.0	25.0	25.0	30.0	36.5	W.N.W.	Snow; wind veered to N.N.W. the fr. at $\frac{1}{4}$ past 12 p.m. was 12 lbs. the sq. foot.
31	28.75	34.0	28.84	35.5	30.0	30.0	30.5	24.0	31.5	W.N.W.	
Mean										1.365	Sum.
										Height of the cistern of the barometer above the ground, 23 ft. 6 in.	
										Height of the cistern of barometer above the presumed mean level of the sea, 479 ft. 6 in.	
										Height of the external thermometers above the ground—Fahr. soft; Self-reg. 38 ft.	
										Height of the receiver of the rain-gauge above the ground, 5 ft.	

Height of the cistern of the barometer above the ground, 23 ft. 6 in.
 Height of the cistern of barometer above the presumed mean level of the sea, 479 ft. 6 in.
 Height of the external thermometers above the ground—Fahr. soft; Self-reg. 38 ft.
 Height of the receiver of the rain-gauge above the ground, 5 ft.

THE ANALYST;
▲
QUARTERLY JOURNAL
OF
SCIENCE, LITERATURE,
NATURAL HISTORY, AND THE FINE ARTS.

EDITED BY
EDWARD MAMMATT, Esq., F.G.S.

VOL. X.

LONDON:
SIMPKIN, MARSHALL, & CO.
WHYTE & Co., EDINBURGH; BARLOW, BIRMINGHAM.

1840.

TABLE OF CONTENTS

TO

VOLUME X.

-
- | | |
|--|---|
| I.—Observations on the Origin and Progress of English Liberty, No. I., 1. | Annals of Natural History, 179; The London and Edinburgh Philosophical Magazine and Journal of Science, 179. |
| II.—Rambles in Western Switzerland and the Jura, No. I., 26. | XI.—An Essay on the Fluctuations in the Supplies of Gold, with relation to Problems of Political Economy, 181. |
| III.—Desultory Sketches in Natural History.—The Hyzema Group, 43. | XII.—A Paper on Judiciary Statistics, 205. |
| IV.—The Monk; a story of the Alps, 75. | XIII.—Observations on the Origin and Progress of English Liberty, No. II., 215. |
| V.—Essay on the Expediency and Means of elevating the Profession of the Educator in the Estimation of the Public, No. I., 103 | XIV.—Slavery and the Slave Trade, 238. |
| VI.—The Mnsician about Town, 129. | XV.—An Essay on the Expediency and Means of elevating the Profession of the Educator in the Estimation of the Public, No. II., 215. |
| VII.—An Historical Sketch of French Literature.—V. The Love Songs of the Troubadours, 144. | XVI.—Sentiment and Sensibility; a Sketch, 269. |
| VIII.—Critical Notices of New Publications—Account of the Voiage and Travaille of Sir John Maundeville, Knyghte, 151. | XVII.—Recent Contributions to English History, No. I., 275. |
| IX.—Reviews of Foreign Works lately published on the Continent, 170. | XVIII.—The Musician about Town, 290. |
| X.—Outlines of Periodical Literature relating to the Natural Sciences and Philosophy.—Magazine of Natural History, 175; The Naturalist, 177; The Foreign Monthly Review and Continental Literary Journal, 177; | XIX.—The Servant Marie, 309. |
| | XX.—“It is no Fiction,” 314. |
| | XXI.—Thoughts on Poetry, &c. 320. |
| | XXII.—Critical Notices of New Publications—Festus, a poem, 323; An- |

- nales des Sciences Natur., 332; Practical Observations on the Causes and Treatment of Curvature of the Spine, 332; Elements of the Pathology of the Human Mind, 341; a Practical Treatise on the Human Teeth, 346.
- XXIII.—Outlines of Periodical Literature relating to the Natural Sciences and Philosophy.—The London and Edinburgh Philosophical Magazine and Journal of Science, 347; The Phrenological Journal and Magazine of Moral Science, 349; The Naturalist, 349; The Magazine of Natural History, 351; Annals of Natural History, 352.
- XXIV.—Notices of Recent German Works, 354.
- XXV.—*Divi Botanici*; or Sketches of Botanists whose merits are commemorated in the Appellations of Plants, No. IV., 357.
- XXVI.—An Essay on the Expediency and Means of Elevating the Profession of the Educator in the Estimation of the Public, No. III., 363.
- XXVII.—Critical Observations on Bishop Burnett's "History of the Reformation of the Church of England," 404.
- XXVIII.—Remarks on Classifications of the Mammalia, 433.
- XXIX.—Rambles in Switzerland and Savoy, No. II., 446.
- XXX.—Essay on the Origin and Progress of Animal Magnetism, 464.
- XXXI.—The Musician about Town, 483.
- XXXII.—A Night in the Black Forest, 431.
- XXXIII.—*Miscellanea Meteorologica*, 498.
- XXXIV.—Critical Notices of New Publications.—Outlines of Analogical Philosophy, 507.
- XXXV.—Outlines of Periodical Literature relating to the Natural Sciences and Philosophy.—Magazine of Natural History, 526; The London and Edinburgh Philosophical Magazine and Journal of Science, 529; Annals of Natural History, 531.

THE ANALYST.

OBSERVATIONS ON THE ORIGIN AND PROGRESS OF ENGLISH LIBERTY.

"A mighty pomp, though made of little things."—*DRYDEN*.

THERE was a time when the English mode of government was spoken of as a model for a republic; and the liberty and prosperity which distinguished that people were attributed solely to that spirit of wisdom which pervaded the laws and statutes of their constitution. This period passed away, and was succeeded by another tone of opinion, which found, or affected to find, in the constitution, defects of such a grave character as to generate a suspicion of the importance of that liberty which could not stand the test of impartial investigation. Thus unbounded admiration was succeeded by extravagant deprecation. Many of its most graceful features had, in consequence of the new scrutiny to which it had been subjected, been overlooked in the grand volume of the constitution; and the examiners appear not to have been aware that those defects which they supposed they had discovered, might possibly be more the effect of their own false position and incorrect point of view, than truly pertaining to the system before them.

It may appear strange, yet it is nevertheless a fact, that the people of England were not aware of the excellence and value of their constitution, until it was pointed out to them by a foreigner. It is true that they always spoke of the authors of that imperishable work with the utmost respect and veneration; yet it appears that their praises were bestowed in the inverse ratio to the superficiality of their acquaintance with the principles contained therein. There was, however, a lustre and nobility of feeling which dictated this praise: it was the soul, the spirit of patriotism, which, presupposing the perfec-

tion of its code, drew their attention away from a critical examination of its merits. Thus it was reserved for that foreigner to unfold before the world the singular merits and benefits of the English Constitution ; and so skilfully has he performed his task, as to attract the gaze of the whole of Europe to that wonderful specimen of legislation. The appearance of De Lolme's book created a great sensation throughout Europe (with the exception of the English, who scarcely noticed it) ; and the best spirits of the age were at once awakened and stimulated to a higher order of investigation and enquiry on that topic.

Impartial and critical examination generally leads to the discovery of defect. Thus it was with that constitution in question, the admiration of which was greatly qualified by the cool analysis and discussion of its merits occasioned by the appearance of De Lolme's works. But the source from whence arose that light which most effectually broke up the ancient spell which encircled the English code, was the questions arising out of the American war. The most experienced and talented statesmen of the age concurred in lamenting the adoption of those measures which the ministry of that day pursued against America, and which tended to involve the constitution in a mist of ambiguity and uncertainty with regard to public right. The essential conditions, also, which were about that time introduced into the common law—such as the endowment of the judges with a broader degree of independence ; by abolishing the use of *general warrants* during the legal proceedings against Wilkes ; and the tampering with the natural duties of jurymen, which took place under the ministry of Fox, with regard to their verdicts—plainly shewed that the constitution was many a wide degree from perfection. The true character of the English Constitution was not misunderstood by the transatlantic Englishmen ; on the contrary, experience had placed in bold relief full before their eyes its many defective points, and its harsh outline of ancient Norman manners and customs. The Americans, then, with such a picture before them, and stimulated by an ardent spirit of liberty, found not much difficulty in framing a constitution more in accordance with the principles of general freedom than the one existing in the mother country.

Strictly logical maxims, and profound theories laid down in politics, it is well known, fall far short of their mark in application to practical life ; and well they may : for what human power, however extensive and far-seeing, can contrive so perfect a range of policy as to fall in and blend with the numerous chances, accidents, and circum-

stances, which are ever arising ; and the annoyance and frustration of the deeply-concocted schemes of the wise theorists? At no period of the history of civilization was the truth of this so evident, as at the time when the Constituent Assembly of France attempted the propagation of the American principles of liberty in their country. A great number of talented and influential men at the head of the government seemed resolved upon improving the liberal statutes of their neighbours ; and thus to make up, by precipitate reform and innovation, what they lost in time. The fruit of their zeal was a series of the most profound and brilliant enquiries respecting the conditions of national liberty ; and the proposed constitution which they had built up from those acute logical researches was, in point of theory, a closer approximation to perfection than even the far-famed English Constitution itself. And although it was stifled at its birth by subsequent revolutionary agitations, which even threatened to overthrow the English Constitution, it will ever remain in history a lasting monument of human sagacity and profound political philosophy. The English Constitution, like the gnarled yet majestic oak, braving at various periods many political storms, has stood its ground, and maintained its stately position, for more than six centuries ; while the new French code, raised, as it were, by a sudden stroke of magic, in all the gorgeousness of modern splendour, was from the commencement at the mercy of a suddenly emancipated and whimsical multitude, who destroyed it before they knew what had fallen beneath their sacrilegious hands. It is a fact that when Louis XVIII. introduced at last a constitutional government into France formed from the model of the English, it was not that constitution, nor its statutes of liberty, which took the attention of surrounding countries and of Europe, but the sound oratory and eloquence which flowed from the French rostrum.

In England, they seem to be in possession of liberty without troubling themselves with the why or the wherefore, or in the least meddling with motives and principles. In France, the favourite employment of the politician is to reiterate elementary principles ; in England, they discuss practical points. In France, the orator and journalist throw off brilliant sentences on the principles of liberty and the organization of society, which deservedly places them, in point of philosophical oratory, far above the English.

All inventions in the arts, sciences, mechanics, and industry, are, originally, confined to those requirements concerning which the people of that particular age have become anxious and unanimous. Per-

fection and refinement are only the effects of observation, and reflection on the moving principles, and, lastly, on the examination of the due correspondence between cause and effect, with regard to the practical application of those inventions. When we have arrived at that point of perfection which, bearing the stamp of sound theory, and, at the same time, answering all the purposes of practical application, we are as apt to neglect the repetition of the elementary principles, just as we were, a little before, but ill-disposed to recapitulate the rough mechanical effects in the early state of the invention. Bacon very happily characterises that progressive state of human development. The first steps toward advance in civilization, which constitutes the deduction, derived from pure experience, are thus styled by him, *axiomata infima*: they are the points of direction, arising rather from physical than mental activity, and constitute the first conditions of the organization of society, and are more or less in possession of the most savage people. The step which lies in the extreme opposite to the former is, the indulgence in theories and philosophical researches into abstract principles, apart from the beaten tract of practice. This course is generally and zealously adopted by those nations who, having advanced considerably on the high path of civilization, and not immediately encumbered with difficulties, are not pressed by necessity, or stimulated by a power of a more practical turn. Such theorists, having so little of practical ballast (if we may be permitted the expression) in their composition, soar away from the earth into the clouds of metaphysical obscurity, scarcely short of utter unintelligibility; yet we must do them justice, and admit that their abstract exertions are doubtless manifestations of noble and reflecting minds, although their efforts are hardly productive or useful for practical life itself. *Suprema et generalissima rationalia sunt et abstracta et nil habent solidi*. It is only those axioms which unite theory with practice, like vitality with matter, that lead on directly to consummation in the various branches of human knowledge and practical life: they are the *axiomata media, vera et solida et viva, in quibus humana res et fortuna sita sunt*.

"All this is understood by itself with us," observed Sir J. Mackintosh to Mons. de Stael, in reply to the admiration which the latter expressed at a very philosophical essay which had just then appeared at Paris, on the principles of constitutional liberty. A similar answer might have been uppermost in the mind of Napoleon, although, perhaps, he might not have deemed it prudent to utter the same. In reply to the eulogy bestowed by the writers of the day on the merits

of the consular constitution, which they placed far above those of the English, "You might do better with less theoretical merits and more practical liberty, of which you do not possess the tenth part of the English," he might have thought, on reading the panegyrics.

In 1789 the French rejected the constitution which was offered to them by Louis XVI on the 23rd of June, because they considered its provisions defective; yet twenty-five years afterwards they accepted, with gratitude, one, in many essential points, still more faulty. Ever restless and theorising, the French began, in 1814, a new apprenticeship of political speculation, under the difficulties of a triple load of taxation, compared with that of the year 1789. No administration was afterwards more suitable to their actual wants and national necessities than that of Richlieu, Decazes, and Martignac, who, with firmness sufficient to maintain their ground, or at least to prevent them from receding, were yet not bold enough to strike out any decided line of advance. Yet they were dismissed in favour of declared opponents to national liberty, for no other reason but that they did not act up to general and theoretical principles which, however perfect in themselves, were not calculated to work in harmony with the circumstances and spirit of the age. Again, in 1828, so deeply the airy notions of theory had eaten into their minds, that when one of the most important, secure, and unequivocal guarantees of national liberty was offered to them, in the introduction of the municipal laws, it was rejected with disdain because it was not *more complete*.

Nor were the English at all times free from this, perhaps, natural predilection for political abstract theory. Their political writers of the seventeenth century exercised it, as the French do now their intellectual capacities, in investigating and establishing subtle and profound philosophical principles, wholly regardless of their consistency with practical application; and they escaped the fatal consequences of losing the substance by catching at the shadow, only by the simple harmlessness of Richard Cromwell, the thoughtlessness of Charles II, and the impetuous temper of James, his brother.

Ultimately, however, this speculative spirit subsided, and was succeeded by a more sober tone, the growth of a more practical habit of reflection and experience. Men gradually became aware that theory and practice were two distinct terms, and they gently relaxed their addiction to the former in favour of the latter; while, satisfying themselves with a more homely and useful course of study, and surrendering their ideal notions of perfection, they disdained not to take advantage of the immediate state of affairs by which they were surrounded,

and, applying their wisdom to the reform, the change, or amendment of their constitution, took as their guide the circumstances and the wants of the age, in the midst of which it was their destiny to live. No Englishman who is at all acquainted with the history and constitution of his country will ever believe that the far-famed English liberty forms a part of his undoubted birthright; nor will he be so blind as to consider it as a patrimony descended to him, in its present form, through a long series of generations. No: on the contrary, those who can bestow a cool and scrutinizing attention to the merits and the rise and progress of their noble constitution, will not fail to perceive that, like the massive rock, its base, its heart, and summit, were not framed by one sudden stroke of creative power, but that its majestic growth had been nourished and consolidated, by the action of generally imperceptible influences, throughout the course of many centuries. The origin and guarantee, then, of English liberty, must be sought in general circumstances rather than the wisdom of legislatures; and it must, also, be apparent that the forms and provisions of the constitution are more to be considered the effect than the cause of that liberty. Indeed, we meet with frequent instances which evidently show that the spirit of liberty never failed to enlist under her pure-white banner the existing forms and laws of society, sometimes combatting with their aid, and not infrequently in despite of them.

The enthusiastic industry with which many political historians have searched, since Montesquieu, not only for the germs, but even for the fruit and forms of liberty in the forests of Germany, has some resemblance to that school of authors of the later period of the Roman Empire, who, ever since Plutarch, have vented their angry feelings against the order of things in which they lived by extolling the merits and the glory of the little republics of Greece. Their speculations might have proved harmless if they had not now and then overstepped the confines of school learning and theories, and attempted to apply them to immediate and practical life, after the manner of Hergault-Secheller, who entered into a disquisition of the laws of Crete when the question was of those of his own country.

It appears that the Saxon, like all the other Germanic tribes at the time of the emigrating of nations, possessed among them, as regards their social life, those *axiomata infima*, the first rude rules of experience, which the wants and pressure of necessity never fail to force upon a people in the earlier and crude period of their congregation. Moreover, they doubtless possessed also many regulations susceptible of improvement and refinement. But their constitution

formed not the guarantees of general and national, but of individual liberty; the liberty of the owners and proprietors of land and manor, to the injury of those who could not boast of such possessions, and who were, in their inferior state of bondage and servitude, scarcely a grade differing from that of real slaves. It is probable that the states-right of the Saxons was more congenial with the spirit of the people of that day than we suspect, and it may have worked well within its limited sphere; but it was by no means calculated for a more extended range of society, or capable of sustaining more noble purposes. How little value the Saxons themselves set even on those statutes which were capable of improvement and application to a wider fabric of society, is clearly evident from the facility and willingness with which they exchanged them for more despotic ones: a circumstance which can be explained only by the casualty to which those regulations owed their existence, and in which the moral conviction of their validity was far from participating. Their elective offices were easily converted into hereditary rights; and the previous equality of the landholders gave way by a series of services, as required from them by the feudal system, to foreign as well as private privileges. The Anglo-Saxon chiefs who came over to England at the head of their own retinue, had, it would appear, as the victorious lords of the conquered aborigines, but little cause to trouble themselves with the introduction of new laws into the subdued provinces other than those of their own country, so favourable to their individual personal rights. Historians and antiquarians have long disputed about the nature and spirit of the constitution which the Anglo-Saxons introduced into the new countries founded by them. All parties seem to build their surmises on the strange supposition that slavery, originating in an early stage of civilization, ought not to yield to the civilization of succeeding ages; or that *liberty* cannot be constituted a right, if its historical origin cannot be proved. It is evident, from the least disputed facts in history—such, for instance, as the vast power which the landholders possessed over their servants, bondsmen, and the few inhabitants of towns, the total absence of a middle class in society, the little respect that was paid to existing laws, and, finally, the incessant commotions and agitations which divided and distracted the provinces—it is evident, we say, when all the circumstances are distinctly considered, that the Anglo-Saxon constitution was either originally of an oligarchical character, or had at least, in the course of time, degenerated into one.

The Anglo-Saxon liberty, if any such ever existed, might have

resembled, in some measure, the so-called German liberty of later ages, which was the privilege merely of a few individuals of high rank and large possessions, during the session of the Diet, of which they were members. That the civil rights of Englishmen are entirely different from similar baronial privileges, and, moreover, are not even connected with the latter, or even of Anglo-Saxon origin, may be inferred, and with some degree of certainty, from the course of the march of that people through the British Islands. It is known that the military colonization of the Anglo-Saxons had extended so far as the foot of the Scottish Highlands; whilst the Normans carried their conquests no farther than the limits of the present England. Supposing, then, that the traditions of British liberty had their origin in the Anglo-Saxon policy, it is reasonable to expect that we might find them in the most unfalsified form in the Lowlands of Scotland, where the descendants of the Anglo-Saxons, although surrounded by numerous populations of Danes, still preserved their race independent and unmixed, compared with those of the other provinces, and where the present native language had been early and generally cultivated and perfected.* Yet what is the fact? Why, that those faint traces of early liberty which occasionally appear to the historical investigator, are found, not in that country, as might have been expected from the above mode of reasoning, but, on the contrary, in those districts where Britons, Anglo-Saxons, Danes, and Normans, were most closely cast together, and their habits and customs mixed and amalgamated by intimate intercourse. The truth is, in no other country was the feudal system more severely and rigidly in action against the people and their kings, than in Scotland. In no country were the parliament, the jury, and the judges, in so loose and precarious a condition, and less guided by established laws and provisions, than in Scotland. Traces of those defects are still found in the constitution of the Scottish courts of justice and of juries. Indeed, there is but one opinion among the best informed men in Scotland: namely, that all the truly beneficial principles and provisions of liberty were not imported into England from Scotland, but, on the contrary, from the former into the latter country.

Be this as it may, thus much is certain, that all traces of early liberty in England, if any such ever did exist, must have vanished on the appearance of the first Norman princes; for we find in those times

* Sir W. Scott, in his introduction to "Sir Tristram," a national romance of the thirteenth century.

that the mandate of the king, countersigned by his council, was considered as positive law.* Should, however, there really be a period when the first germs of British liberty could be historically substantiated, doubtless, it would be that of the feudal system, as introduced by the Norman conquest, which was followed up with more severity, and on a more extensive scale, than in any other country of Europe; which subjected to the immediate royal authority indiscriminately, more or less, all classes of society, the most humble not excepted, by which—as is still evident from the expressions and forms of English jurisprudence and its penal code—*vassalage* and *submission* were placed in one and the same category: and which united, under the focus of royal supremacy, all the classes of society which were hitherto divided in an infinite number of inimical and contending parties, and thus securing the individual right by the protection of the whole mass.

In English history we meet with numerous instances of regulations and laws which may be traced from that period, bearing, in fact, a striking resemblance to those provisions which served afterwards as the basis of the English constitution: yet we may search in vain, even for several centuries after the Norman conquest, for traces of anything like a system or plan in those laws, which owe, in reality, their existence merely to chance and accident, rather than to the wisdom and sagacity of their authors, who, it is more than probable, were not at all aware of the merits and importance of their random, and often thoughtless enactments. Whether it be advisable, in point of education, that children should commit to memory *words* at an early stage of infancy, when their understanding is, as yet, not sufficiently developed to catch the true signification, is a question which, perhaps, is out of order here; yet it is true that *nations* are educated on that same plan. History tells us that all of them have learned the most important truths first by *heart*, and afterwards only by the palpable import of their sense and spirit. With all infant nations the *word* preceded the *thought*, and the form the solution of the problem; and it is only with the aid of this observation that we are enabled to account for many contradictory points in the early history and institutions of nations.

A remarkable instance of such contradictions is evident from the history of England, at a period when other nations were in a deep lethargy as regards civilisation. So dull and stagnated were the moral and political conditions of the people of surrounding countries, that

* Sir Henry Spelman, "In verbo: *judicium Dei*."

their contemporary history presents to the student but a lifeless and uninteresting blank : and future historians will be obliged to have recourse to the annals of England, as was formerly the case with ancient Greece and Rome, as a guide to the delineation of European history during that long and dark period.

"It is ridiculous," says Hume, in his Autobiography, "to acknowledge a regular law of liberty in the English Constitution previous to the times of the Stuarts." This great historical work is, in fact, only a development of that notion : yet Brodie and others seem to have mistaken him ; for when he asserts a fact, namely, that the arbitrary and despotic acts which so enraged the English people of that period had nothing novel or peculiar in their character, but that they were merely a repetition and continuation of those arbitrary and certainly criminal practices which had been perpetrated, during the course of many centuries, by preceding English monarchs, those writers actually charge him with partiality in favour of the house of Stuart. Hume never intended to intimate that there was no such thing as fixed laws with regard to national liberty ; for the very laws mentioned in the *petition of right* in 1627 were more than sufficient to belie such an assertion : all he meant was, that no respect was paid to those laws by the princes, and certainly in this he only stated the melancholy truth. The monarchs never suffered the Magna Charta to stand in the way of their propensities ; on the contrary, they hesitated not to follow their inclinations in the very teeth of, and open violation of, its provisions. If they occasionally acknowledged the national right, it was more the consequence of the pressure of necessity than of any thing like a moral respect for national institutions. Neither the Plantagenets, nor the Tudors, nor the Stuarts, ever dreamed of any thing like submission to national law, or of checking their arbitrary and illegal acts, until compelled by opposition and national remonstrance. More than two centuries elapsed before the *petition* of rights was followed by the *bill* of rights. A single glance at the constitution, and the history and connexion of its component parts with one another, as well as with the general object, will convince us that their rise and progress originated in accident.

Civil right, though it is generally ranked, because a *private* right, far below that of the *political* or *public* right, forms, nevertheless, such an essential foundation and condition of the benefits to be derived from the latter, that it cannot but occupy the first rank in that point of view. The *common* law of the Anglo-Saxons, like all the Germanic tribes, was nothing more than a right of *customs*, arraigning every accused

individual before the bar of a certain number of *peers*, that is, of men of his own condition, occupying the same rank as himself in society. The promulgation of the feudal system changed that state of affairs only in so far as to convert the right of the *people* into that of the *court*; and while it was formerly required that the judges should share with the accused an equality in social rank and condition, it was now requisite that that quality should chiefly refer to the conditions of that species of service which they were called on to perform for the benefit of the crown. But the chief and essential changes which the law in itself underwent, were mainly attributable to the reforms which took place among the mass of the people, generating in external circumstances and the spirit of the age, and particularly through the exertions of the ecclesiastics, partly by alienating those customs which were originally simple and intelligible to all the members of society at large, from the common comprehension of the people, by investing them with a sort of scientific mist and accompanying jargon, and subjecting them to a sort of systematic study far beyond the understanding of the populace, who henceforth scarcely knew the meaning of the new forms and terms which had been introduced; and partly, and chiefly, by actually suppressing those popular customs in favour of the more scientific *Roman law*, the revival of which suited better the tastes and interests of those dignitaries.

Until the Norman conquest, the duties of judges and lawyers had devolved upon the Saxon monks, who studied and taught in the cloisters. At this period the foreign ambassadors introduced among their retinue the first civilians into England. Thobald, Archbishop of Canterbury, imported several of this order, and among them Roger Vacarioces, the first teacher of the Roman law at Oxford. The laymen here, as in other parts of England, protested at first against the new law, and King Stephen, who was anxious to reconcile the people to his usurpation of the crown by conciliatory measures, interdicted the Roman law. At the assembly at Merton, where the clergy moved the sanction of the Roman law by which illegitimate children may become legitimate after the marriage of their parents, the barons declared positively that the customary laws of the country should not be in the least infringed or changed; and a hundred years afterwards the parliament manifested the same spirit, and repeated the same bold declaration, adding that "England shall never be ruled by foreign laws." In this instance the clergy might, as in most others, have prevailed, but for their own imprudence. In this affair, their wonted patience and perseverance forsook them; believing themselves to be entirely indis-

pensable in the administration of judicial affairs, they imprudently took offence at the opposition which had been made to their measure, and withdrew in ill humour from the field of controversy, thus, leaving to the laymen full scope and leisure to follow up their advantage. Thus, turning their backs in spite on their opponents, they lost their judicial position, which they never after recovered. Under the reign of Henry III, episcopal mandates were issued, which interdicted the clergy from occupying themselves in future with secular lawsuits; while, at the same time, Innocent IV prohibited them from reading, even as mere profane works, the laws of the country. The non-interference of the clergy was further secured by the regulations in the Magna Charta, which Henry III at last set in full practice, to the effect that the secular judges were no longer to wander about, and follow the steps of the royal camp and periodic residences, but were henceforth to hold their sittings at a certain fixed place in Westminster. The teachers and pupils of the common law, who were excluded from the ecclesiastical institutions at Oxford and Cambridge, established, in consequence, judicial colleges for themselves, called, as yet, the inns of court and of chancery, modelled after the ecclesiastical ones, and privileged to confer titles and certain academical degrees on distinguished members. Both parties maintained for a long time their opposition, with equal success. Wherever the influence of the clergy found access, as in the universities, and even in the courts of war and admiralty, the Roman and canonical laws were prevalent; whilst in the various courts of Westminster the common law alone was practised.

Thus we find England, as early as the beginning of the thirteenth century governed by two species of legislation, entirely alien to each other, both in form and substance. The frequent clashing of these in spirit, argument, and decision, soon gave rise to a *third* species of legislation; and from the deficiencies which were soon discovered to exist in the practice of the common law, emendations and reforms were introduced.

The common law, based on prevailing customs, usages, and opinions, as long as its explanation and application were in the hands of unlearned judges, must be considered as a sort of progressive legislation, containing in itself the seeds of its reform and completion, and rendering all other legislative contrivances for the conduct of civil life superfluous. Every case in litigation received a judicial decision, bearing the stamp and spirit of the then predominant custom and opinion, reducing all the judgments to a subserviency to the spirit of the time, and justly deserving the appellation of a continual and infinite revelation of

reason. But, contrary to the true and mutable spirit of the common law, an attempt was made to harden and mould it into fixedness, to prevent its moving with, and adaptation to, the temporal circumstances of the age, and to set the *past* as an immaculate and unchangeable criterion and guide for the *present* and the *future*. The barbarous nations, when they settled in the provinces of the Eastern empire, began to collect and write down in a book their customary laws; and in so doing, yet perhaps with a good intent, they perpetuated an injury and a curse upon society. Like the child, who walled and fenced and protected its beloved flower from what it thought the rude and boisterous atmosphere, and thus reduced it to a stunted weakly thing, while its friendless fellow grew alone, inhaling the sweet fresh air, the brilliant sunshine, and the cooling showers, flourished forth in full-developed beauty; so the recorders of those customary laws, ignorant of the tendencies of their act, and not at all aware of the true nature of those customary laws they were recording, which, in fact, should be left, like the flower, to the ever-changing yet genial atmosphere of existing circumstances, tampered with and spoiled the beautiful flexibility of their spirit, by fixing it within the hard and drying influence of their proper protection.

In England, Alfred was the first who collected the customs of the country into the so-called *Dome Book*, which was extant in the time of Edward IV, but is now lost. Edward the Confessor caused to be made another, yet larger collection, the oldest groundwork of the present common law; and had the plan of making those written records and collections been steadily followed up, it could but have added effect to the pre-eminence of the Roman law, when compared with the rude efforts of uncivilized nations in the art of positive legislation. Happily for the fate of the common law, the Norman princes cared little concerning the records of customs which were not part and parcel of their policy, and which were not objects of interest to conquerors in general. The common law then gained some respite from further mischievous tampering by sheer neglect.

The impulse which had now been given to the art, if we may so express ourselves, of popular order, and which spread to, and enlarged the view of, judicial affairs and transitory customs, had its effect by imperceptibly transforming those customs into positive laws, and thus erecting a beacon for the guide of similar litigant cases in future ages. A series of those prejudications were officially recorded by the prothonotaries of the several courts, from the reign of Edward until Henry VIII, and afterwards, under James I, at the suggestion of Lord

Bacon, by particular recorders appointed to the task. These annual records formed at length the source, the fountain-head, of common law; which formed, in the course of time, receptacles of such breadth and depth as at once to defy the most indefatigable and indomitable mind, even though coupled with an insatiable thirst for knowledge and exploration.

The evil was still further augmented by the formality of the proceedings, which were maintained in strict accordance with ancient usage, and in the teeth of the altered spirit of the age. The forms and expressions, too, of the litigant parties, as regards the petitions of the latter and the judicial decisions, naturally of a narrow character, from the comparatively barbarous times in which they had their origin, and when there was scarcely any other property save the soil, and no other important branch of industry than agriculture, were yet further contracted by the introduction of the feudal system, and crippled down and narrowed in order to accord with the limited state of social intercourse. It may be naturally supposed that, with the increase of civilisation, and with the growth of a trading and mercantile intercourse, and, above all, after the abolition of the feudal system, that such antiquated forms must have clashed with the expanding spirit of new affairs, or at least have been neutralized into a dead letter. In some degree, thus it was. The judges, lawyers, and parties themselves, were obliged to invent new names and means in order to facilitate in some degree the march of the new order of affairs; and in some instances the wisdom of these people was curiously displayed, particularly in the disposal and transfer of landed property. In this instance, a sort of learned comedy was played; new difficulties and involvements were generated, which rendered proceedings still more tedious. A sort of pedantic, juridical faction, now formed the base of a legislation from which the spark of life had fled. No wonder that the lack of forms suitable to the real character of affairs constituted one of the main obstacles to the distribution of justice with regard to the common law.

Thus in the same manner, and from the same cause, as the Pretorian jurisdiction was transformed at Rome into a peculiar species of legislation, was the judicial authority of the lord chancellor in England converted into a new and particular kind of legislation, called *equity*, the court of which extends its jurisdiction over all those civil affairs of the realm which are of a modern origin, and for which the ancient form of the common law could not have provided: such as insolvencies which required a judicial investigation; the care to be

taken of the person and property of individuals of nonage and insane mind; and, finally, all those commercial transactions for which no provisions are found in the common law, and which all fall under the jurisdiction of the *court of equity*, as a third species of legislation, also provided with peculiar regulations and forms.

Considering, then, the casualty to which the civil laws owe their introduction and formation, it may not be unreasonable to doubt whether the *jury*, the far-famed pillar of the English liberty, be really the true image of the ancient Germanic popular courts. This much is certain, that, long after the conquest, the juries were greatly limited and neglected, and that the mode of settling disputes by judicial single combat was very much preferred. The expression, also, in the twenty-ninth chapter of the Magna Charta, which was generally considered as referring to the confirmation of the jury, or rather its jurisdiction, and by which no freeman can be endangered in goods and person except *per legale iudicium parium suorum vel per legem terre* (by the decision of his peers and the laws of the country)—that expression, we say, has such a striking resemblance to that used by the Emperor Conrad II, about two centuries previously, in securing to his Italian inferior vassals the inviolate and perpetual possession of their benefices (*nemo beneficium suum perdat nisi secundum consuetudinem antecessorum nostrorum et per iudicium parium suorum*.—L. L. Longab., l. iii.; Tit., ii., i., 4), that it may be fairly questioned whether the jurisdiction of the jury was at all the subject of consideration. And if we add to it the remarkable circumstance that the exactions—or, as we may now term it, the spirit of the age—of the *feoffees* of that period consisted chiefly in securing their independence against the encroachments of their superiors, and, further, that it was the *feoffees* who extorted the Magna Charta from King John, it is more than probable that the above expression refers to the irrevocability of the granted benefices (as those by the Emperor Conrad in Italy), rather than to aught pertaining to the jury, its privileges, or functions.

Perhaps, if construed in that more probable sense, the jury might be nothing else than the continuation of that mode of judicial proceeding which was current when the courts of fees existed, and when the accused was judged by his peers. That mode of proceeding, however, soon sunk into oblivion in those countries where the feudal system was not of so comprehensive a character, and only included under its rule the nobles and other important subjects; whilst it could but serve as the basis of a progressive and lasting institution of liberty in a country like England, where, as we have already stated, the feudal system rami-

fied throughout the whole kingdom, taking in and subjugating the whole mass, from the noble to the peasant ; and the royal courts of fees were, from the beginning (Wales and the Isle of Man alone excepted), the only tribunals in the country which extended their immediate authority to all classes of society in all secular affairs.

Thus were formed three peculiar kinds of legislation, which extended their jurisdiction to certain distinct and well-defined branches in practical life ; at the same time they were, and had been during many centuries, hinged upon, and subject to, the will of the monarch. The throne, which was regarded in England as the source of justice, was, at the same time, and truly in a less figurative sense, the source, also, of a most unlimited arbitrary power, the growth, or rather the abuse, of an ancient custom, arising, as we have before observed, from the most widely-spread and absolute system of feudalism in the world. Even to this present moment there is no perfect allodial property in England, and the king is still styled the *lord paramount* of the country. It was only under Charles II (by the statute 12th of Car. II, c. 24), in the latter part of the seventeenth century, that the oppressive conditions and drudgeries attached to landed property, by the rules of the ancient feudal system, were entirely abolished : a greater acquisition, says Blackstone, to the civil property of the kingdom, than even Magna Charta itself.

Notwithstanding the gradual accumulation of facts and experience as regards the customs or the laws of the country, the princes were but ill-disposed to respect any regulation which clashed with their individual interests, or thwarted their self-willed inclinations. The monarchs generally considered their rights of legitimacy more sacred, and of higher importance, than the customs or the established laws of the land. The first prince who showed a disposition to observe those laws which had been extorted from himself and his predecessors was Henry III, in whose reign, also, and records, first appeared the clause *non obstante*, by which means he and his successors at once acknowledged and violated the laws. *Letters of protection*, also, and mandates of various kinds, impeded or regulated the course of justice ; and the repeated contrivances which were resorted to for the purpose of meeting that abuse plainly indicated the extent to which it had been carried, and the futility of the attempts which were made to resist it. The first regulation which was intended to counteract this evil, was made in the reign of Edward I ; but it is very doubtful whether he or his successors paid any respect to it. The great number of letters of protection issued

under Edward I gave rise, in the reign of Edward II, to loud clamours and complaints, which had the effect, in the second year of Edward III, of reducing them under the ban of illegality. Yet so closely had they become entwined with the practices of the age, and the interest of individuals, that they were not easily suppressed, but were to be met with even as late as the times of Queen Elizabeth.

The management of judicial affairs, which, under the immediate care of the crown or cabinet, was considered, in other countries, as a violent but transitory encroachment upon the established institutions of the state, constituted, in England, supreme and regular tribunals, which existed for centuries under the presidency of the lord high constable and commissioner of the star chamber. The equerry (*constabularius*), in the early domiciles of the Germanic tribes, might probably have been one of the elevated and favoured officers of the opulent landholders, who had to maintain an extensive retinue. As those possessors of the land increased their domains and their lordly power in the provinces of the Roman Empire, it is very likely that it suited their dignity, as well as convenience, to assign a portion of their newly-acquired territory for the support of these upper servants of their household, instead of maintaining them under the lordly roof, as was hitherto the case. Thus the first step was laid for their exaltation. Then came another remove: the landholder was changed into a *lord*, and, as a matter of course, his domestic retinue rose in rank with himself, particularly the upper servants, who now, doubtless, assumed the appearance of court officers, retaining their ancient names as a sort of title of honour; while the services attached to their offices were abandoned to inferior servants, coachmen, and other upper menials, who might, also, in their turn, have climbed upwards in dignity, had there been another Roman Empire to be conquered and plundered.

In the course of time, the office of constable assumed a very high and important station at court; for we find, at a certain period of history, that the household of the court, which in England meant neither more nor less than all the subjects of the king, were placed under his direct care and management. This *domestic discipline* soon assumed, in the camps of the conquering princes, the character of a *martial court*, which soon became consolidated in the single person of the *constable*, who then became invested with such a plenitude of dictatorial power as to be at once incompatible with all rational and peaceful purposes, and at the same time to give cause of serious alarm even to the princes themselves. Henry VIII, the most arbitrary monarch of England, at length abolished the office; yet he could not entirely sweep it away, it still clung like an un-

fied throughout the whole king-
mass, from the noble to the
from the beginning (Wal-
the only tribunals in the
thority to all classes of

Thus were formed
ed their jurisdiction
practical life;
many centuries
The throne

was, at the
also, of
abus

from

v

ence to the royal proclamations.

In 1641 the star chamber was abolished, and with that establish-
ment fell the privilege of the crown to govern by its own arbitrary
will. If royal proclamations were occasionally issued, their actual
enforcement depended on the views and opinion of the several judi-
cial authorities, who were now guided by defined and positive
laws.

The rights of supreme authority, conceded to the governments
which were formed under the conquerors of the Roman Empire, in
those countries which had been composed of its wreck, are of a dif-
ferent and various origin.

Royalty, among the ancient Germans, denoted a similar authori-
ty to that of the Scottish lairds over their clans, or of the Arabian
sheiks over their Nomadian tribes, being no more than an extended
order of that authority which the father or the patriarch holds over
the members of his own family; and so long as the wandering
hordes were confined to their two ancient acceptations, the martial
and the pastoral, they formed a closely-united society, held together
by the most simple and direct links, and, accustomed to the broad
fields and the open air, it was their practice to congregate at a pub-
lic rendezvous, to receive the commands, and put themselves under
the guidance of their chief or king. When civilization, however,
progressed, and the roving tribes, finding themselves in undisturbed
possession of pleasant and fertile domains, settled down into various
trades and professions, and thus passed from their primitive condi-
tion, then royalty dwindled into a mere title of distinction. Agri-
culture especially tended to sever and dissolve the links which held
together the tribes, and broke off and divided the mass into little
independent communities, in separate districts and circles, under the

in times of per
account by
Charles
was
aff

Fou.

sanction ne.

All the parliament,

amations the same legal force

clared that henceforth nine councillors of

form a legitimate tribunal, the business of which

, to decide on matters respecting the obedience or non-obe-

state chief of
till acknow-
they se
in o

pir masters, issued forth as vo-
re of grasping some land, as
al revolution occurred, and
red in its vortex; and
session of wealth went,
that their wealth and
with the physical
In this emer-
n, which, as we
nominal head
ces, the mo-
f from an
is policy
eemen
the
he

ally elected by the pe-
ough least noted, candidates.—(The
tute sumunt.—Tacit. *De Mor. Germ.*, c. 1,

The expeditions of the northern lords, commu-
grations of nations, were, in fact, not so numerous as
usually believed; and, further, they were not so much the
the nations, as of the chiefs who undertook such expeditions.
ther was the number which, in the first instance, marched from
their country, large. The chiefs appear to have gone forth at the
head of comparatively a few followers, but whose ranks were
swelled, in the course of their progress, by a host of adventurous
volunteers. Whoever the leader may have been, whether *princes*
of the royal blood (as with the Franconians), or individuals elected
from the midst of the people, this is certain, that the great bulk of
the numbers which formed the expeditions consisted chiefly of the
servants and dependents of the leaders; since it can scarcely be sup-
posed that the *freemen*—i. e. the landholders—would abandon their
quiet possessions at home, and seek an uncertain fortune in foreign
countries: a supposition which is even contradicted by the fact that
the names of the modern nations which had settled in the subdued pro-
vinces of the ancient Roman Empire occurred also, for many subse-
quent centuries, in ancient Germany or Scandinavia; a circumstance
from which we may reasonably suspect of exaggeration those reports of
the emigrations of the northern nations. The spoils of landed prop-
erty which were made in these wars, and which were wrenched, in the
provinces, either from private individuals or from the Roman fiscal,
were divided, of course, among those invaders, in proportion to the
part they took in the conquest, or rather to the number of warriors
they brought into the field. Thus it happened that extensive es-
tates fell to the lot of many a leader of these freebooters, over which
they ruled in the ancient spirit of Germanic independence and right
of landed property, almost as unlimited as the monarch himself; and
although the owners of minor estates were as independent within
their territories as those of the more extensive ones, yet the influ-

ence and ascendancy which the latter naturally gained by the superiority of wealth gradually led to their indirect control over the former. Amidst these circumstances, royalty sunk into a mere title, or at best maintained but a nominal authority. The rights of, or the power of commanding, forced services, taxes, and villinage, constituted the exclusive privilege of the owners of land. As regards the *king*, he certainly presided at the head of the freemen (owners of landed property), and was looked up to as the supreme head in all political and judicial affairs; but he had not the slightest power over the persons of any class of the people, nor could he enforce the simplest service of the humblest individual, unless that individual belonged to the circle of his own landed property (that is, if he possessed any), and merely in his simple capacity of a landholder or freeman. These two distinct lines of right and authority ran parallel to each other for a long period; and it thus happened that the advocates of opposite opinions respecting the social forms and principles of that early part of the middle ages—such as Dubos and Baulainvilliers—support their respective opinions with equal truth on facts apparently at variance with each other. The singular state of society at that early period, when extreme liberty on the one hand, with its licentious train of arbitrary power, was so strikingly contrasted by abject slavery, with its debasing concomitants, on the other, has involved the history of those times in such a depth of gloomy obscurity, as to baffle the industry of the most erudite investigator, not only as respects that particular period of time, but also as regards the real state of society in subsequent ages.

Such a state of things, bearing, as it were, a doubly opposite character, was not calculated to be of very long duration. Political freedom, which usually follows the standard of wealth, was at that time closely allied to landed property, the only species of wealth of importance; and so extensive was the power which these territorial possessions engendered for their owner, that it threatened to overwhelm, in one vast domination to the wealthy lords, all those freemen of minor allotments of land throughout the country.

The vast consequence which was now attached to the persons and the character of those extensive landholders, and the glitter and show of their establishment, as well as the wide range of their power, naturally generated a species of rivalry, which increased to open contention and jealousy among the numerous hosts of menials and dependents. These classes grew impatient with their condition, and yearned for a share of that property which in itself brought to its possessor so wide a range of power; and, for the purpose of lift-

ing themselves up to a level with their masters, issued forth as volunteers in new expeditions, in the hope of grasping some land, as their lords had done. Thus a sort of moral revolution occurred, and the landholders found themselves involved in its vortex; and though rich and powerful as far as the possession of wealth went, yet they could not fail of being convinced that their wealth and numbers were but as a breath of air compared with the physical strength of the host to which they were opposed. In this emergency, all parties were willing to appeal to the crown, which, as we have before observed, was looked up to at least as the nominal head in political and judicial affairs. Under these circumstances, the monarch, like the ancient Romans, soon transformed himself from an impartial judge into an arbitrary master, and so ordered his policy as to reduce, under the classification of nobles and peasants (freemen and slaves), the whole population to the condition of subjects to the crown. Thus the unwary multitude, in its negotiation with the nominal head of the realm, lost its actual independence; and the monarch, seizing the favourable opportunity, converted the *nominal* into *real* power, affecting at once public liberty in general. Henceforth the whole of the population was bound to perform service to the crown, according to their capacity, in times of war and peace; while the monarch swayed over the mass of the people, like the *Emperors* of old, in the full power of despotism, rendering all classes subservient to their will, converting the private right of a lord over his dependents into that of *government*, and palliating the services which the freemen were bound to perform by some gaudy title and distinction, which, in fact, only marked their degree of dependence on the crown, and the kind of service expected from them at court.

The origin of our modern social relations, as well as our pedigrees, are lost, certainly in darkness, not in the *clouds*, as some court chroniclers would have us believe; but rather in that *earthly mass* of the mother evil from which they sprung. The social ties of the middle ages were wrought by the hand of slavery and bondage; and the actual human nature of all classes, from the haughty liveried vassal of the crown down to the humble *soccager*, was indelibly stained and imprinted with the stamp of abject servitude.

The compass of the rights and privileges of the crown pointed still, despite their reforms, to the source from whence they sprung—to the immunity of landed property, and which contained in itself the germ of its own destruction. At that early period of civilisation no notion was entertained as to the management of estates in distant countries, without disposing of them at once into other hands. Indeed, the control and regulation of distant estates was

not of easy accomplishment when the means of communication were so few and precarious ; and even these were obstructed by the want of that vivifying principle of intercourse, a freely circulating coinage. A large estate was managed as a large piece of coin, by dividing and cutting it into little pieces for the various uses of minor import, and with still greater disadvantage in the prospect of yielding it up without the hope of ever repossessing it. For the distant estates which were conferred on distinguished individuals and favourites of the court, the crown received in return only a certain proportion of personal services—current pieces of coin scarcely being known at the time—which, when the value of landed property increased with the progress of civilization, must have been wholly inadequate and out of all proportion to the value received, to the great detriment of the crown, and increased pecuniary advantage of the landholder.

The pecuniary losses thus sustained by the crown were attended with yet greater grievances with regard to the royal influence in practical life generally ; since all civil functions, commissions, and rights of administration of public affairs, were closely connected with the possession of private property, with which the favourites were invested by the crown. The monarch, then, as in all anterior as well as subsequent ages, after having given away his substance, and in fact the only means of sustaining his power, met from the individuals whom he had enriched, opposition, resistance, and protestations nearly on every occasion when the royal decrees clashed with their individual private interest. Thus the crown suffered materially by its bounty to its vassals, who, grown numerous and rich, and consequently powerful, were able to defy the comparatively poor monarch, whose fate, in many respects, resembled that of Shakspeare's Lear.

Neither the more arbitrary proceedings of granting benefices, as practiced by the Marovingians, nor the more regular mode of rewarding warriors by which Charles Martel laid the second and lasting foundation of the subsequent feudal system, and which Charlemagne vainly endeavoured to convert into a public affair by blending it with the ancient forms of the people—neither mode of proceeding was calculated to improve the domestic economy of the crown ; on the contrary, these two dynasties, the Marovingian and Carolingian, grew so poor upon the throne that they were finally obliged, when nothing was left them but the crown, to yield it up to the richest and the most powerful of their own servants. The German kings and emperors, through the custom of investing strangers with their private property as soon as they were called to the throne,

divested themselves, at the same time, of the only means of sustaining their regal authority by substantial dignity and independent opulence, or of securing the throne to their descendents. Indeed, had this imprudent lavish custom of sacrificing their private property, been followed up by subsequent princes, Germanic Europe could never have assumed the appearance of union beyond that of a confederacy, or enjoyed more liberty than is common to a republican oligarchy.

A similar fate, arising from the same quarter, might have awaited the mass of the people from the development of the feudal system, had it not been for the revival of the Roman law, from which the doctrines of the *Regalia* were borrowed. By this means a new system of supreme authority was devised for the crown, the influence of which soon spread itself abroad throughout society, and into the very bosom of practical life.

It was at Bologna, in Italy, where the professors of jurisprudence first began to teach the doctrines of monarchical prerogative, as founded in the Roman law. But the German emperors were too late in acting upon the principles of their newly-discovered power; and in their attempts to employ them against the rights of the rising and flourishing cities of Italy, the crown lost its only chance of defence and support against its more powerful vassals. In France, however, since the third dynasty of Hugot Capet and his successors, the monarchs, being at first confirmed in the legitimate possession of the throne by but a few of their vassals, were naturally driven to look to their own resources and tangible strength; and knowing, at the same time, that waste or inattention in these particulars was tantamount to a relinquishment of their crown, they took great care, not only not to squander their estates, but to improve them by all possible means, as the only certain basis of the security of their usurped throne. Thus was laid the first stone of the foundation of a real arbitrary monarchy, the full development of which was greatly favoured by the circumstance that the administration of the judicial courts and tribunals was, in consequence of the multiplication and complication of public and private litigious suits, yielded up by the martial nobles to the more learned and persevering lawyers, who, having no estates of their own to defend against the crown, gradually regained for that power what had been formerly wrenched from it by the selfish vassals, in putting into practice, especially since the reign of Louis the Saint, the legal yet novel view, viz. that the most important rights formerly attached to landed property were now to be transferred to the supreme authority of the realm, leaving nothing to the owners of the estates beyond the en-

joyment of the usufruct. This new doctrine, whatever its real design might have been, was received by the mass of the people with cheerfulness; for its tendency appeared to be, the restoration of order in the confused state of public affairs. Yet it cannot be denied that the legislators, in promulgating the new doctrines, had solely in view the advantage of the crown, and had as little at heart the interest of the people, as the promoters of the former customs had it in establishing the rights of the few landholders. The results, however, proved a substantial national gain: a degree of stability and centralization was infused into the government, and the oppressed multitude knew, at least, now, where to seek for redress against the cruelties of the minor number of aristocrats.

This second remodelling of the royal power had not made its way to England, and for this reason, that the Roman law had not only never attained a dominant and established ascendancy in the island; but also, and chiefly, because the rights of the crown had, in that country, never undergone such revolutions as in the other parts of Europe. In England the kings had always maintained the ancient prerogatives, despite the increasing strength and power of landed estates. The Norman expedition to England—the last scene of the *emigration of nations*—happened at a period, and issued from a country, when and where the original statutes of the feudal system were yet fresh in memory and in full operation. Nor could they have been greatly degenerated in a country like Normandy, where the princes were as active as the people were of a young and recent origin. William the Conqueror found in his *right of conquest* the best opportunity of setting in full force the principles of feudalism; and he did so, with much cruelty, among the newly-conquered people of England. Moreover, the frequent and violent changes in the regal succession tended to furnish every new conqueror and usurper with the means of renewing from time to time, and with increased severity and violence, the ancient feudal rights of the crown over the landholders and their possessions. Thus, while in Germany and other parts of Europe the bonds of feudalism were imperceptibly loosened from the people, in England that same system of thralldom, as its force and vigour were reduced by the hand of time, was resuscitated and refreshed, and every link throughout the whole chain was kept bright and in perfect repair.

In fine, England was the only country in Europe where the feudal system was so universal as to connect the humblest subject immediately with the crown: a circumstance to which we frequently recur, because by it alone we shall be enabled to find the clue to many obscure points in her history and constitution.

(To be continued).

RAMBLES IN WESTERN SWITZERLAND AND THE JURA.

CHAPTER I.

INTRODUCTION.—THE JURA.—SIGNAL OF BOUGY.—SUNSET IN SWITZERLAND.—ST. GEORGES.—THE GLACIER.—THE PINE FORESTS OF THE JURA.

It is scarcely less amusing than instructive to observe how the same series of objects is differently viewed by different eyes, and how the feelings, fancies, and prejudices of the individual, never fail to show themselves in all his remarks, and give a colouring to all his observations and opinions. This is, I think, the true reason why descriptive works, and, above all, accounts of travels, are ever new and amusing, and why, also, the very same scenes may be described correctly by several passers-by, and yet each shall differ from the other, and all may be read and studied with pleasure and advantage. It seems to me that this alone would be a fair excuse for multiplying still further "recollections of travel;" but, on the present occasion, I flatter myself that there are even stronger reasons for a fresh attempt, and I hope to persuade the reader of this in the following pages, and induce him to allow that I have discovered rich mines of golden gossip, shadowed forth in the title which heads this article. And yet it is a bold thing, in these days of universal peregrination, to talk of discovering any district at once unvisited and beautiful; and still more bold will the presumption seem when the country is such an one as Switzerland, talked of by every body, and visited by half the world. Perhaps, however, talked of and visited as Switzerland undoubtedly is, there is no instance to be mentioned in which the partiality of the great herd of travellers for high roads and celebrated *guide-book* marvels is more strikingly apparent. The great majority go from Paris to Geneva by the "diligence," pass over the Jura probably at night or early in the morning, and are hardly aware of the existence of such a mountain chain. From Geneva they will hurry to Chamounix, to see the glories of Mont Blanc; then, if they propose making a *regular* Swiss tour, will return to Geneva, go to Berne, thence to Thun de Grindelwald, and Meyringen, stopping, of course, at

Interlaken ; and from Meyringen will either journey northwards, by Luzern and Basle, into Germany, or turn southwards again towards Italy. And these people will be satisfied, and think they have seen Switzerland, and will talk, not only of the lofty and magnificent mountains, but also of the habits, manners, and appearance, of the people, little aware that the annual influx of thousands of human beings, of all sorts and kinds, has completely destroyed the real national character in those districts which alone they and the multitude visit. It is in consequence of this limited knowledge that we hear people complain of the national character of the Swiss being deteriorated, and of their having become a dishonest people, wholly given up to the cheating of travellers, especially Englishmen ; and that the once innocent, simple inhabitants, do little else than prey upon the unsuspecting stranger, who, in his turn, has become the innocent, the interesting, and the injured. When, however, any one desires to amuse himself with foreign travel, and is *not* thoroughly satisfied before starting that the English language and the habits of Englishmen are the only things worthy of his attention and admiration, he may find, even at the present day, and that, too, in Switzerland, a simple-minded, intelligent race, little accustomed to strangers, and little injured by their contact—a race whose love of country is yet unimpaired, and who, if need be, would stand up and die in defence of their mountain home and their liberty. In order to discover the very existence of this real Swiss feeling, it is necessary, however, to put off the thick warm coat of prejudice, which the too fortunate Englishman is rather apt to indulge in, even in his summer excursions. The people must not have their prejudices shocked by the exhibition of ours when we go as strangers among them ; and we must put up with many little discomforts, and often real annoyances, which, in the well-regulated hotels on most of the continental high roads, would never be endured. For instance, good or even tolerable dinners, decent *solitary* beds, quiet evenings, un-loquacious inn-keepers, speaking intelligible French, or even, as is often the case, English : these are things left behind when we quit the ordinary travelled route ; and, in fact, one who cannot trust to himself, with a knapsack on his back, a compass and map in his pocket, and a pair of stout legs and shoes to match, had better not look for amusement where *he*, perhaps, might only find annoyance, and where the difficulties and dangers are not sufficient to add excitement to the objects of interest.

However, presuming that my narrative may be more tempting than

my reflections upon it, I will proceed to describe a few days spent, last summer, most agreeably, in wandering and exploring in the valleys of the Jura ; and though the results of my expedition cannot be said to possess much that is novel or of scientific interest, they may, at all events, help to pass away an idle hour, and induce others to visit, in a similar way, a district abounding in wild romantic and forest scenery.

The part of Switzerland to which the peregrinations I am about to describe were confined, consists of a narrow strip limited by a line through Lausanne and Neuchâtel to the east, and the frontier of France to the west. It includes a small part of the great valley of Switzerland, and the greater part of the line of mountains well known under the name of "The Jura."

This chain of the Jura extends for about one hundred and fifty miles in a direct line between the Rhine and the Rhone, and forms the natural boundary of France and Switzerland. Towards the north it expands in an easterly direction, forming several irregularly parallel ridges ; but throughout there is an approximation to a division into three principal lines, which, however, nearly unite towards Geneva, and are represented in the very singular mountain of the Saleve, which rises immediately to the south of that city. Such is the general appearance of the chain. The elevations are all considerable, but none of them excessive, the usual range being from three to five thousand feet, although Mont Tendre reaches a height of nearly six thousand. The outline is, for the most part, rounded and heavy, wanting all the sharp, jagged, needle-shaped projections, which render the high Alps so picturesque and grand. Seen from a distance, there is nothing striking or prepossessing in the prospect ; and the eye of the traveller entering Switzerland is naturally and necessarily attracted to the more remarkable configuration which the great chain of the Alps presents to view. It is only when we come near, and view in detail the separate mountains of the Jura from the valleys between them—when we wander in the vast forests of lofty pines, or look down from a bold, rocky, naked eminence, upon the mixture of desolation and cultivation, of nature and art, of wildness and beauty, which the numerous valleys present—when we come suddenly upon the most retired and most lovely of lakes, or thread the narrow and singular gorges which at intervals present themselves—it is only, in fact, when we *search* for the beauties that we find and truly enjoy them ; for I am willing to admit that they do not force themselves

into notice, or boldly challenge the admiration which is certainly their due.

Nor are the mountains in this western part of Switzerland without their proper amount of cold and ice. There are natural ice caverns, where the warmth of the sun never penetrates, and where the rich tracery of nature's crystalline architecture may be studied on a grand scale. There are, too, other and more permanent stalactitic beauties; for the limestone, of which the Jura is chiefly composed, is often broken into caverns of various sizes, some of them presenting very beautiful appearances, from the infiltration of water charged with carbonate of lime. Of these, I regret to be obliged to acknowledge that I did not see any; a neglect which arose partly from ignorance, but chiefly from necessity, not having so much time to spare as the subject demanded.

The first expedition that I made towards the Jura mountains was with a friend, who, to my great loss, could not accompany me on subsequent occasions. Perhaps, on this account as much as any other, there is a freshness and agreeableness about my reminiscences of this trip, which hardly attaches to other and more extensive explorings. I shall give the narrative pretty much as I find it in my journal, and trust to its truth and close adherence to fact to excite interest, rather than to any colouring that I might be tempted to indulge in.

On a beautiful afternoon in the beginning of August, I embarked with my companion at Lausanne, on board the steam boat which touches there on its way to Geneva; and in about two hours we landed at the pretty village of Rolle, whence we slowly ascended to an elevation at some few miles distance to the north, on the highest point of which, about eighteen hundred feet above the level of the lake, there is a little summer-house kind of building, marking a spot well known to picturesque hunters in the neighbourhood of Geneva as the "Signal of Bougy." It was our intention to remain here till sunset, and then, having feasted our eyes with the magnificence and beauty of the extensive prospect, we were to make the best of our way to Aubonne, a pretty village, situated at no very great distance.

We arrived at the signal about half an hour before sunset, and had leisure to look around and admire the noble landscape that presented itself to our view. Owing to the situation of this elevated ridge near the bend of the lake, the whole of the vast sheet of water, extending from Geneva to Villeneuve—a distance of not less than fifty miles—

is exposed to view with the most perfect distinctness. Every little bay and inlet, every spire of a village church on either side of its banks, every one of the numerous villages and towns modestly retiring under the rich woodland scenery, which at once overshadows and discloses the works of man—every object, in fact, that the eye can rest on with pleasure, is here seen clearly and sharply defined, in harmonious contrast with the blue sky and bluer water. Just opposite the signal the lake attains its greatest breadth, nearly ten miles ; and the mountains on the opposite or Savoy side are seen to recede, leaving a narrow opening, which discovers not only the lofty summit of the giant monarch of mountains, but also a considerable portion of the eternal mantle of snow which envelopes his shoulders, and which the comparatively insignificant but much nearer elevations effectually hide from view in almost every other spot in the vicinity of the Lake of Geneva.

And if, leaving these glories, we turn to contemplate the scene to the east and north, there is a new set of beauties, a new species of loveliness, not so striking, but scarcely less interesting than the other. The frowning mass of Mont Tendre, already in deep shade—for, the sun setting behind this mountain, the intervening valley is the first darkened—the rich but sombre forests which clothe the sides of that as of most of the Jura mountains, the contrast of bright green corn-fields, which nothing can make to look gloomy, the multitude of patches of vineyard, and the occasional appearance of a naked sandy waste, all these, in their way, add to the effect, which is completed by distant glimpses of pretty villages, here and there peeping out from their green hiding-places.

Amid all these elements of beauty, and commanding a prospect of much that is most lovely in Switzerland, did we stand to watch the gradual but too rapid disappearance of the sun, as he approached the western horizon. At first the rich golden tint was predominant, and there was a degree of pain in the very intensity of the effulgence ; but this soon mellowed down into a softer brilliancy, and tinted all distant objects with a lovely rose colour, which in its turn became paler and paler, as it died away upon the mountain tops, and left the snowy summits in their clear cold reality. There is something deeply impressive in thus watching the gradual departure of brilliancy, richness, and loveliness, first, from the nearest objects, where we seem as if able to grasp and detain the beauty, and then successively from those farther and farther from us, just touching the distant prospect, and giving it the vividness of reality, only to pass away the more

quickly, and leave all in darkness and obscurity. Such scenes ought to be impressive lessons to the young and thoughtless: for so pass away the glories of this world; and the distant objects of ambition, love, or happiness, shine to them with a colouring as brilliant, and one which will prove as evanescent, even as the last tint communicated by a summer's sun.

Certainly a fine sunset in Switzerland is a thing not easily to be forgotten when it has been enjoyed in silence and under favourable circumstances. The lengthening shadows of the mountains, the changeful tints of the calm waters, the distant snow on one side and the gloomy forests on the other, are well calculated to produce a train of thinking and ideas of rest and peace, reminding one of childhood and of home, and promoting a sadness and melancholy which are quite in consonance with the best feelings of our nature. There comes over one, on such occasions, a desire and longing after another and a nobler state of existence, where the spirit will not be bound down by the close cords of mortality, but will be free to range at pleasure from world to world, and know clearly those hidden things which the utmost stretch of imagination cannot now guess at.

I shall not often be led into these digressions, but there are few evenings of my life which recur so often with pleasure to my memory as the one I am now describing; and I have yet more to say concerning it. Not long after the sun had quite set to us, but while it still communicated a rosy hue to Mont Blanc, whose lofty and distant summit did not become tinted till the snow of all the other and nearer mountains had recovered its former whiteness, we strolled along the ridge, and soon had occasion to descend a little on coming to a narrow ravine. In the course of two or three minutes we again had the same prospect before us: the same, but how changed! Mont Blanc had now become of the colour of chased silver, a rich creamy appearance, which the distant snow will sometimes take on evenings like this. The other mountains frowned in their dark outlines yet more clearly than before; for behind them had just arisen the queen of night in all her simplicity and majesty, her full orb resting, as it were, and skimming lightly upon the summit of one of them, as if pausing to look upon the earth before commencing her nightly course. It was her pale blue mingling with the last faint touches of the rose, that had produced the rich but momentary colour we so much admired.

After a pleasant stroll through cultivated fields, catching at intervals a momentary glance of the white summits of the distant moun-

tains, we arrived at our destination, and after a supply of unexceptionable coffee, bread and butter, and honey, took a moonlight walk round the village, and sat down in the public walks, admiring once more the beautiful lake and mountain scenery which had so often before delighted us. We returned to our inn, enjoyed very tolerable beds, and next morning found us journeying westward; and about eleven we reached the town, or rather village, of Gimel, where we obtained directions as to our further progress towards "St. Georges," in the immediate vicinity of the mountains.

Before arriving at this last named village (which is three thousand feet above the level of the sea), we had quite entered on the district of the Jura, and already had wandered through extensive forests of pine, and mounted and descended some considerable elevations. But the appearance of St. Georges, from the last of the undulations which form the flank of the Jura, is pretty picturesque, and even romantic in the extreme. The road, passing along a natural cut in the rock, and showing on each side the naked limestone in a variety of fantastic forms, conceals, for the most part, the view of the mountains, until, becoming suddenly more rocky, and turning rather to the right, we left its formal course, and trusting to our map and compass, struck off to the left, and, mounting by a narrow path in that direction, were soon rewarded by the rich and wild scenery which disclosed itself to our view as soon as we had reached the summit of a moderate ascent. Immediately before us stretched the noble mountains, clothed to their summit with the dark, sombre, but truly magnificent, vegetation of the lofty pine forests, which extended in one unbroken mass as far as the eye could reach. Between the spot on which we stood and this steep face of the mountains, there lay a lovely and quiet valley, cultivated, but not tortured into too great regularity: waving with corn, smiling in fruit trees, and completed by the pretty peeping tower of a church rising above the houses of the little village to which we were journeying. The perfect calm that reigned around contributed to the effect of this scene; and we descended and arrived at the village almost without speaking a word to interrupt the flow of feeling which such a scene was well calculated to produce. The narrow and irregular street we found almost choaked up by a large flock of goats loitering about, and apparently driven down from their mountain pasture to be milked. Threading our way through them, though not without a little difficulty, we were soon directed to the abode of the "maitre du glacier," who was to provide us with a guide to take us across the mountain and show us the glacier of the Jura,

to see which, indeed, was one principal object of our expedition. We found the house—the lower part serving for the goats, and, we presume, the upper being appropriated to bipeds—but the master himself we did not find, and were obliged to wait some time before any one could be hunted up to conduct us. It would have been quite useless to attempt to explore upon speculation, as the glacier is in a cavern, whose mouth would not be easily seen, even at a short distance. Meanwhile we examined the primitive wooden houses of which the village was composed, and amused ourselves with watching the few inhabitants in the place, who, in their turn, were most energetically employed in scrutinising us. After waiting some time, a half-silly half-drunk individual presented himself, and in the fewest possible words intimated his readiness to be our escort. As there was no choice we accepted his services, and immediately commenced a clambering ascent through the thick forest, which, as I have said, clothes the face of the mountain, and seems to rise like a green wall behind the village. Although we had been walking for some hours, and our guide had apparently very recently emerged from a cabaret, we did not find this specimen of a Swiss mountaineer peculiarly active or difficult to keep up with. At every fallen tree that we came to he paused, and intimated his desire to rest; and although at first we indulged him, and plucked the strawberries and other fruits which abounded, yet we soon discovered that it would be long before we arrived at the top if we did not set an example of activity. After a good deal of difficulty, we got the poor wretch to understand that we would not pause so often, and at length, in about an hour, reached the summit, crossed the ridge, and, descending for a short distance, came upon the verge of the cavern, into which we immediately descended by the help of three ladders, and then found ourselves in a large natural ice-house.

It was a hot August day, and about noon, when we arrived here; and the sudden transition from the burning sun to the cold chilly cavern was very delightful, and lent, perhaps, a favourable colouring to the scene before us. We had descended about forty feet, and entered, by a vertical and rather chimney-shaped aperture, a regular and extensive cavern, of which the walls and flooring were of clear, solid, and excellent ice, forming beautiful stalactites and stalagmites, grouped in all kinds of fanciful and grotesque positions. The thickness of ice was extremely great, greater, indeed, in most parts, than could be calculated; but the roof was of bare rock, and exposed the geological structure of the cavern. It was formed along the line of

an anticlinal axis in the limestone of which the Jura chain is composed; and on one side the stratum was bent round so as to make a fine natural arch, the north and south direction of the axis coinciding nearly with the vertical wall to the west. The ice was exceedingly well preserved, there being only a small pool of water in one corner; and the amount was not perceptibly diminished, although it had been pretty freely used for nearly three months. There was quite sufficient light from above to show everything within with the utmost clearness, so that the disagreeable and smoky necessity of torches was avoided.

Having indulged our curiosity, and finding the guide of so little use, we started off without him in the direction of our destination, that is, eastward; and, trusting to compass and map, entered boldly into the labyrinth of a vast and magnificent pine forest, full of uneven and rocky ground, and sheltering in its recesses many wolves and bears, although, as it was summer, we did not much dread coming in contact with such animals. However, on we went; and having traversed the forest for some distance, observed a large and isolated rock, rising suddenly and boldly before us. By the help of our sticks and some half-grown trees, we managed to reach a flat surface on the top, covered with noble pines and other trees, together with abundance of brushwood; and then, proceeding a little way, discovered that we were within a couple of yards of a sudden precipice, which was perpendicular for a hundred and fifty or two hundred feet, and gave a magnificent *coup d'œil* of the boundless forest which stretched out in all directions before us. Here and there jutted out a mountain mass like that on which we stood, whose bare vertical sides refused to be the resting-place of a tree. All else was one dark mass of vegetable life, and the effect was singularly interesting and grand.

We retraced our steps, descending by the same tree which had helped us to ascend, and which seemed the only approach to this singular plateau; and after a long and difficult descent, and much walking in the direction our compass pointed out, we found a road, which led across another mountain, and through another forest, until we came out upon the great plain of the valley of Switzerland, not far from the village of Bière, where we dined; and afterwards confined our journeying towards Lausanne to the high roads, which present little more interest here than in other countries where the picturesque and the romantic are not so common. Thus ended my

first trip to the Jura. It was a most delightful one to myself, and I shall be well satisfied if I have communicated any of the amusement to my reader.

CHAPTER II.

ENGLISH SCENERY.—MEX.—COSSONEX.—ASCENT OF THE JURA.—
SUDDEN CHANGE OF SCENERY.—THE DESERT.—FIRST VIEW OF
THE LAC DE JOUX.—LE PONT.—THE LAC DE JOUX.—LAC DE
BRETET.—VALLOBRE, THE VALLEY AND VILLAGE.—JOUQUE.

It was about a month after my return to Lausanne from the little expedition narrated in the preceding chapter, that I again bent my steps to the western mountains; and I did so, resolved to explore in a wilder district, and to give more time to the various points of interest that might present themselves. Even then, however, I was sadly hurried, and missed much that well deserved examination, although I certainly saw a great deal, both of Switzerland and the Swiss, which travellers in general have carelessly and even superciliously passed by. On starting, I took the road to the north-west, which leads by several small villages to Cossonex, near which place there is an abrupt and considerable ascent; and the rest of the route, as far as the Jura, is upon the high ridge of sand hills running parallel to the mountain chain, and terminating towards the south at the Signal of Bougy, concerning which enough has already been said.

Almost immediately on leaving Lausanne every vestige of houses is lost sight of, and the scenery strikingly resembles the very prettiest and quietest met with in the middle of England. Were it not, indeed, for the Savoy mountains still visible in the distance, the illusion would be complete; for the few vineyards to be seen give one quite the idea of hop-gardens, and the rest of the ground, covered with waving corn-fields and beautiful orchards, or dotted here and there with rich clover and smiling meadow land, is all neatly enclosed with quickset hedges, and covers the gentle slope of a most English-like hill. Really the effect of a few miles of this agreeable home-scenery makes one enjoy yet more the rich contrast presented when the noble and majestic mountains form, as they usually do, an important feature in the landscape.

As I had not started very early, I found it expedient to halt at a

small village between two and three leagues from Lausanne, and pay a visit to a little road-side public-house, where I made an early dinner of ham, bread and cheese, and wine. While I was conning over my map preparatory to these being put on the table, the good landlady paused in her occupation to assist in the examination; and I regret to say that the map-maker fell grievously under her displeasure, for he had omitted to insert this her birth-place among the villages and towns of Switzerland. It was very amusing to see the earnest but ineffectual search of three or four people who happened to be present, and who left their wine to examine in all parts and in every canton, under the impression that the name of the village (Mex) could not be absolutely omitted, but must have been misplaced. However, after about half an hour they gave it up in despair, and I went on my way, leaving them to digest the disappointment and rail at my map at their leisure. I dare say it formed the subject of conversation for many a day, until some election of a deputy, or unfavourable news from France, gave a new turn to their curious enquiries.

The country continues pretty well cultivated and rather tame for some miles, until at a sudden turn, and crossing a small river, we come in sight of the town of Cossonex, which I have already alluded to as placed on a ridge of highish sand hills parallel with the Jura chain. The first view of this place, its pretty spire, and one or two houses showing themselves from amidst a mass of trees which crown the summit of the ridge, is very picturesque and striking.

The ascent is sudden, and seems almost precipitous for perhaps a couple of hundred feet; but it is probably owing entirely to the irregular action of water wearing away, on one side, the almost incoherent sand of which this and most of the hills of the middle of Switzerland are formed.

The town of Cossonex is not remarkable, nor is the road between it and Cuarnens. After leaving the latter place, however, we come within sight of Mont Tendre, one of the highest of the Jura mountains, and before long begin to ascend the rather steep sides of the pass between that mountain and the Dent de Vaution, which forms the northern, as Mont Tendre does the eastern, limit of the Lac de Joux. It was not till two hours after leaving Cuarnens that I reached the highest part of the pass; but the walk, though long and rather laborious, amply repaid me in the number of beautiful views across the great valley, which seemed to increase in richness and luxuriance as I gradually became more and more elevated above the surrounding country. It was interesting to see the distant snowy

mountains successively elevating their broad shoulders above the horizon, until at length the whole chain became visible from the Molleson and other mountains in the canton of Freyburg, to the Savoy mountains, presenting towards the south-east splendid and very characteristic views of those two giants, the Dent de Midi and the Dent de Morcles,* which stand as sentinels, obliged, indeed, to allow the waters of the Rhone a free passage, but frowning upon, and threatening, as it were, with instant destruction, any bold intruder who may venture to prosecute his wayward fancies, and attempt to trace here the history of the now calm and uniform, though once fearfully disturbed, course of nature.

And then it was not less interesting to let the eye dwell upon the rich and charming tract of cultivated land extending between the lakes of Neuchâtel and Geneva, and abutting directly against the highly inclined strata of the mountain I was scaling. The bird's eye view of this portion of the valley, when seen in comparison with *real* mountains, presented the appearance only of a vast plain, with a chain of low hills running N.E. and S.W., and here and there a small series of undulations, just sufficient to take away the character of monotony that might otherwise have belonged to it.

It will easily be conceived that scenery so varied and extensive, so rich in all that constitutes the riches of a country, and yet so noble and majestic in the distant prospect, could not be unattractive. Many, indeed, were the long lingering looks which I cast behind me as the shades of evening gradually closed in, and the broad, deep, and lengthening shadow of the huge mountain before me made the intermediate valley dark and gloomy, and threw out with greater distinctness the outline of the distant elevations, whose snowy summits were becoming tinged with the rosy hue which marks a Swiss sunset.

By the time that I arrived at the top of the pass the sun had quite disappeared, and was succeeded by the moon, which, being at the full, poured forth a flood of light and glory, causing it to be almost too bright for the eye to gaze on without pain. Then, too, the scenery entirely and quite suddenly changed, in a manner as unexpected as it was striking. I will endeavour to give some idea of the new view which presented itself, both because it was in itself most beauti-

* The valley of the Rhone, after a long course to the south-west, turns suddenly and at right angles to the north-west at Martigny, and passes between these two singular mountains in the *only* break that occurs between Mont Blanc and the Oberland Alps.

ful, and also because it was characteristic of the range of mountains among which it occurred.

In rising to the highest part of the pass, of course all prospect of the country beyond and to the west was cut off; and, as I have already intimated, it was by turning occasionally to look upon the middle and east of Switzerland, that the beautiful and interesting views were obtained. As soon, however, as the ridge had been passed, all this to the east was immediately lost sight of, and the scenery was that of the Jura, of its mountains and valleys, its heights clothed with lofty pines, and its precipitous masses bare, naked, and wild, and sternly defying all the efforts of vegetation. The change, consequently, was as complete as could well be. From gazing on the smiling valley and waving corn-fields, the eye rested on vast masses of dark and gloomy forest scenery, only here and there enlivened by a bold crag, or, at the most, by a few acres of pasture land. Such is the general character of the greater part of the Jura; but there is always some striking feature, some commanding object, upon which the eye of the traveller fastens with avidity, and which gives an identity to any particular spot, and induces a feeling of attachment and (if I may so say) friendliness to a view of wild nature not easily forgotten in subsequent wanderings, and amid the contemplation of scenery which would generally be considered more magnificent.

In the view which presented itself on coming fairly within the limits of the Jura range at this point, the principal object was a noble isolated mountain to the right, rearing its lofty head in solitary grandeur to the clouds, and causing the hitherto direct path to wind and wander about, and again ascend after a long descent, giving in its numerous contortions a succession of noble prospects. At length, at a sudden turn, the whole is lost sight of; and we emerge upon a broken, hilly ground, completely different in character, and possessing the features of desert rather than of mountain scenery.

I did not long remain in this comparatively uninteresting track, necessarily pursued by those travellers who trust not to their own legs; for having fallen in with some country people who were going to one of the small villages on the Lac de Joux, I was initiated by them into the mysteries of a cross road, if road, indeed, that might be called which was marked only by an innumerable multitude of loose stones and rocks, brought down by some torrent rushing with uncontrollable violence, and tearing away everything in its resistless course. Following, however, this primitive path scooped out by nature's own hand, and occupying great part of a singular rocky gorge,

with lofty perpendicular walls of naked limestone on each side, and picking our way over this singular and *rather* uneven pavement, we went on for some distance ; and I do not remember to have seen a more wild, desolate, and irreclaimable spot, or one so utterly destitute of all appearance of life or animation. In a moment, however, and from the midst of all this desolation, on coming to a particular point, there was a small opening, and a scene presented itself, with almost magical effect, of a small but placid lake embosomed among the mountains, a few little villages sprinkled here and there on its green banks, and with occasionally a few forest trees clothing the steep ascent of the mountain sides, but all calm and peaceful, and contrasting most delightfully with the wild savage desert from which we had just emerged. In descending to the head of the lake this view was lost sight of for a time, but again appeared glittering in the silver light of the moon, and with a few solitary lamps in the cottage windows prettily reflected from the calm waters, I had arrived at the "Lac de Joux." I was not long in finding a pleasant comfortable inn at the village of "Le Pont" at the head of the lake, and there I took up my abode for the night, much regretting that I could not spend days in exploring the beauties of this neighbourhood.

The position of the Lac de Joux, enclosed on all sides by considerable mountains, and itself nearly three thousand five hundred feet above the level of the sea, is as romantic and singular as it is beautiful. Its shape is oblong, being about five miles in length by one in breadth ; and there is a continuation to the north, by means of a kind of marsh, with another and a much smaller piece of water, called the Lac de Brenet. Besides these two, there is a third much smaller one, situated to the west, which, however, is scarcely more than a pool, and is not connected with either lake. The little village called Le Pont (probably from the bridge which crosses the junction of the two lakes) is placed exactly between them, and at the foot of a mountain of about five thousand feet in height, which is separated, by a very narrow and extremely wild gorge, from another mountain to the west. The Mont Tendre, the highest of the Jura range, shuts in the scenery to the east ; and thus one seems to be completely lost, and quite excluded from all intercourse with the world. But, as I have already observed, the scenery is not less beautiful than it is romantic. Standing between the lakes, and looking towards the south, we see on the left a frowning and barren mountain rising almost precipitately, and only occasionally showing a vestige of life in the stunted grass which here and there has planted itself. At a greater height, how-

ever, there is a belt of pines, and then at the top all is desolation. This wildness, however, is only a required contrast to the rich verdure which clothes the western banks. On this side the ground is broken and irregular, occasionally jutting out some distance into the lake, and then receding to form a little bay or creek ; now rising boldly and nakedly from the water's edge, and then gradually swelling in a gentle rise to the more distant and less lofty hills to the right. On this side, too, there was no want either of cultivation or natural beauty. Forest trees in abundance were there, and their dark green was relieved by a few cultivated patches belonging to the pretty isolated cottages, or the two or three scattered villages which might be distinguished on the hill side, or so near the lake as to be seen reflected in its calm waters.

Passing through the village of Le Pont, and without crossing the bridge, I soon found a foot path leading along the right bank of the more northern of the two lakes, and so by the gorge already spoken of, and to be hereafter described, into the Vallorbe, which lay in my intended route towards a French frontier town called Jongne ; and I feel more than ever how completely language is at fault, in attempting to give some idea of the first two or three leagues of my morning's walk through this charming district. The strange and sudden alteration from the bleak and forbidding aspect which at first characterises the mountains on the east, to a vast forest of pines rising quite abruptly from the little lake, and stretching away in that direction as far as the eye could reach—the contrast of these dark and sombre masses with the mellowing and autumnal tints of a considerable extent of forest trees on the opposite banks—the effect of a few small but well-built white cottages on that side—the extraordinary closing in of the mountains in front—and the curious appearance of a mist which then hung over the foot of the lake, and was occasionally lifted as a curtain, presenting glimpses of the country beyond, until at length it rolled away and vanished from the sight—all these several elements of beauty united, and acting upon the buoyant spirits which health, strength, and a fine cool September morning will give, produced an impression upon the mind too pleasing to be easily or soon forgotten, and which I would wish, were it possible, to communicate to my readers, that they might enjoy some of the beauties of this most interesting part of a most interesting country.

On leaving behind me the sweet lake of Brenet, I entered almost directly a very narrow ravine, so completely overrun with pines of various heights and ages, that I could only occasion-

ally catch a glimpse of the perpendicular walls of naked rock, which rose within a few yards on either side. Proceeding onwards almost in the dark, from the abundance of wood, I soon found that the path began to descend very rapidly, and at length came to a spot from which another valley branched off, and a mountain was seen turning aside from the direction which I had been following. At this point I came into the valley of the Orbe, a river whose source is not far from hence, and which soon turns towards the east into the widening valley, and, after running for about twenty miles, empties itself into the lake of Neuchâtel, near the town of Yverdon.

That part of the Vallorbe which I traversed seemed to be remarkable not more for the wild and almost savage character of the scenery near the source of the river, and before the sudden bend to the east, than for the singular and pleasing manner in which this savage grandeur changed to romantic beauty, and that, again, to the very different appearance of a rather wide, rich, and well-cultivated valley, enclosed by hills, which gradually become less remarkable as they recede, and which, before many miles, have lost all pretensions to wildness or magnificence. Indeed, the narrowness of the ravine, the sudden appearance of an impassable barrier in front, the noise of a not very distant waterfall, and a variety of assisting circumstances, all help to produce a striking effect on the traveller, which effect is increased by the obscurity and gloom of an exuberance of vegetable life clothing the steep ascents on each side, and precluding all view, except that of the mixed wildness and beauty characterising the immediate spot on which he stands.

After a while, on reaching the apparent termination of this narrow ravine, there is a range of rocky and perpendicular eminences running towards the north-east; and here the broken path, which had hitherto served as a rather obscure guide, conducted me to an excellent road coming from the west, and serving as a means of communication between some of the smaller frontier towns of France and the south-west of Switzerland. I followed the road for a short distance, as it wound about in a serpentine course, to diminish the rather precipitous nature of the descent; but, soon getting tired of such regular travelling, struck off by a little narrow path, and endeavoured to descend at once into the valley. I succeeded, although not without considerable difficulty, and even some danger; and by letting myself drop occasionally where I saw a flat projecting terrace below, I at last managed to reach the river, and then, indeed, was amply repaid for my labour by looking up the narrow and singular cleft which the noisy stream had, perhaps,

partly worn out of the limestone rock. The grey perpendicular wall to the south, worn and blackened by long exposure to elemental warfare, reminded me forcibly of the *scars* of our Yorkshire and Westmoreland hills, but are on a far grander scale than even the finest of these. Owing to the sudden turn which the river is forced to make, only a small part of its course is seen here, and even much that might be visible, and does make itself appreciated by one of the senses (that of hearing), is quite hidden from the eye by most luxuriant vegetation, covering every spot upon which a square yard of earth can find lodgment. So completely is this the case, that a large tree often seems to hang almost in the air, its roots being imbedded, as it were, in the very rock itself, and so bidding defiance to the accidents of tempest and the attacks of man.

When I had once descended to the noisy and troubled river, it required only that I should follow it in its course to return soon to the road from which I had diverged. Once more in the direct route, I soon reached the village of Vallorbe ; but by this time the valley had ceased to be romantic, and, although still pretty, presents nothing very remarkable in its widening expanse. The village, however, is one so entirely Swiss, and so very picturesque, as well at a distance as when viewed in detail, that I must just allude to it *en passant*. The houses are, as usual, square, with the roof projecting very much, so as to shelter completely from the weather the galleries running round the exterior on the first floor, and the staircases, which are also outside the house. Wood seems the only building material ; for not only were the walls made of it, but even the shelving roof was covered entirely with wooden tiles, if one may so call the oblong thin boards laid one over another, and forming an admirable and waterproof covering. Each house is separated from the rest by a greater or less space, according to its importance ; and although there was a degree of regularity, and the whole made something like a street, yet this seemed rather the effect of accident than intention, so absolutely independent did each building appear to be of all the rest. The church, a plain brick edifice, stood apart, and overlooked the small family of whose members it, doubtless, formed the effectual bond of union.

After passing this pretty village I left the valley, and crossed its northern boundary by a pass of no great elevation or interest ; and after traversing another valley, naked and barren, and only characterised by some iron foundries, which did not possess attraction for me, I arrived at the foot of a hill, on the top of which stands the French frontier town of Jougne. As this town lay in my road, I

soon scaled the steep and fortified lines, which make the place important as a military position ; and as soon as I reached the top, and had entered the gate of the town, was stopped by a sentinel perched in a little box overlooking the pathway, and my knapsack was immediately taken off and overhauled with the most praiseworthy attention and minuteness. I know not whether it was that searching was an amusement rarely enjoyed, or whether there appeared something contraband in my looks or manner, but certainly never was the operation of turning every thing inside out so assiduously performed. Even a little morsel of soap in a paper, and the insides of a pair of shoes, were examined ; and, to crown all, my note-book was untied and opened, although, indeed, its contents were—being in English—held sacred. When all this had been done, and that, too, on the steps of the guard-house, I was marched off in state, by one of the gens d'armes, to M. le Commandant, who, after arranging my passport, became rather communicative, and showed me various curiosities which he had discovered in his present dull quarters. One of them was, I think, the very finest medal of Julius Cæsar I have ever seen ; and he had, besides this, several other coins and medals, and a few fossils. I soon quitted Jougne, and was glad to escape from it ; for I never have seen any place so absolutely stagnant, or one which seemed to want so entirely every vestige of life and animation. With the exception of half a dozen women talking together near the gate, and the two soldiers who amused themselves with my baggage, there was not another human being to be seen in passing through the principal street at mid-day ; and as for shops, there seemed to be none, or at least what there were appeared empty of goods as well as customers. But if the place is dull, its situation is certainly sufficient to account for any degree of dullness, however great. Placed on the summit of a hill, and commanding an extensive view of bleak and sterile waste in every direction, the eye can rest on no pleasing or interesting object ; for there is not a trace of civilization, and scarcely even a vestige of life, animate or inanimate.

It is true that, even from the very extent of desolation, there arises an idea of sublimity ; and the mind is filled with the contemplation of lofty mountains, and a considerable extent of country, upon which the sun in vain sheds his kindly influence, and the clouds drop no fatness ; but this negative sublimity fatigues even while it produces its effect, and one is glad to hurry over such parts, and hasten to others where beauty is at least present, if it does not preponderate over grandeur.

For many miles beyond Jougne, the general character of the scenery continues, however, wild and desolate. Passing round to the west of a lofty and very remarkable mountain, the Aiguille de Baulmes, I entered a vast forest inhabited by many charcoal burners, where large fires, and the cleared spaces which had provided the material for those fires, struck me as an interesting novelty, though I was rather in danger of being lost, by mistaking some of their numerous paths for my own road. I managed, however, to succeed in getting through the forest, and then made my way across the country by compass till I came to a few houses, after which I had no difficulty in reaching the village or town of St. Croix, which is situated oddly at the extremity or eastern end of a valley, whose narrow commencement by a ravine, opening imperceptibly into the wilder country to the west, I had entered, and almost reached the end of, before I was aware that marks of civilization were so near me. The town of St. Croix is large, straggling, and modern, and hardly deserving of much attention. It is the last town to the north in the Canton of Vaud; and having conducted my reader thus far, I will postpone to another chapter my journeyings in the adjoining Canton of Neuchâtel:

D. T. A.

DESULTORY SKETCHES IN NATURAL HISTORY.

By EDWARD BLYTH.

No. I.—THE HYÆNA GROUP.

VALUABLE as are the zoological characters afforded by the dentition of the *Mammalia*, there yet requires some judgment and discrimination in applying them to the grand purpose of philosophical classification, such as should accurately express the affinities, or degrees of physiological relationship, which different genera bear to each other; inasmuch as a close similitude in the dental characters subsists occasionally without indicating any particular affinity, and a very considerable amount of diversity also obtains, in some instances, between genera that are, notwithstanding, proximately, and even intimately, allied together.

We find this remarkably illustrated in the small group, of the value of a sub-family, which we have selected as affording an interesting subject with which to commence the present series of Sketches on the Natural History of the *Vertebrata*, wherein we propose to investigate the characters on which various groups of animals are founded, and more particularly those of the genera and higher divisions which appear to stand forth in an isolated manner from the rest, in consequence of the distinctive features of conformation characteristic of the immediately superior group, to which they naturally appertain, merging, in some instances, almost to obliteration, in extensive adaptive modifications having reference to some particular habit.

In order that we should be here duly understood, it is, perhaps, necessary to premise, that, although the entire series of *Vertebrata*, and, to a certain extent, the whole animal kingdom, may be ultimately referred to one general type or single universal plan of organization, more or less developed, and variously modified in different classes of beings, yet it must not be supposed, with some authors even of celebrity, but principally those who neglect to study the internal conformation of beings, that the systematic arrangement of animals is founded on arbitrary lines of demarcation, like the meridians of longitude and parallels of latitude traced on a globe or map; that, in truth, there are no real divisions, except those of species; and that, consequently, the efforts of systematists must necessarily be frivolous and futile, when they endeavour to define rigorously the boundaries of their several groups and successive divisions, which are supposed to pass insensibly into each other by a concatenation of intermediate forms, an unbroken series of gradations.

That such is most assuredly not the case, a moment's reflection on the four comprehensive grand divisions established by Cuvier, of *Vertebrata*, *Mollusca*, *Articulata*, and *Radiata*, might suffice to intimate; inasmuch as these could never have been so definitely determined, the multitude of intervening links which such an hypothesis necessarily implies being utterly at variance with the supposition. Not but that certain organisms have been adduced as constituting bonds of connection between these primary *embranchements*, but only on a superficial apprehension of their intrinsic characters: for instance, the approximate obliteration of the vertebrated column in the lowest cyclostomatous fishes, has induced some authors to regard these as intermediate to the *Vertebrata* and *Mollusca*; while an analogous link, or tendency on the part of a molluscous animal to assume the vertebrated sub-type of organiza-

tion, has been supposed to be afforded by certain of the higher Cephalopods, as the Cuttles, which internally deposit a quantity of earthy matter (the well-known *cuttle-fish bone* of commerce). But it should be borne in mind that the establishment of these leading divisions of the animal kingdom reposes ultimately on the *nervous* system, the confluent masses of which are disposed altogether differently in the *Vertebrata* and *Mollusca*; and that, in this most important and influential portion of their organization, both the *Cyclostomata* and *Cephalopoda* rigidly conform to their respective sub-regnal models of formation, the former merely presenting what is comparatively termed an arrested development, the latter a more complete development than usual. The distribution of the principal aggregations of *neurine*, or nervous proximate element essential and peculiar to animal organization, thus determines apart the three divisions of *Vertebrata*, *Mollusca*, and *Articulata*, with unerring certitude; and it remains to be shown that in this fundamental character, to which all others are subservient, a transition from one to another of these primary sub-types of form, or an intermediate organism, exists in any one instance: but we do not attach the same importance to those simply *positive* and *negative* characters upon which physiologists have hitherto attempted to dismember the *Radiata* of Cuvier into analogous divisions, if only because they do pass into each other, as might be predicated from the nature of the difference; their distinction consisting merely in the *degrees of development* traceable in several different minor groups, from the diffusion of the various proximate elements of the body in a homogeneous pulp, to their gradual separation into tissues more or less discernible. Analogy with the three first great divisions should indicate that if equivalent types of form exist among the *Radiata*, their integrity would be as constantly maintained in every species respectively framed upon them.

We may, indeed, fairly waive the consideration of the miscellaneous assemblage of beings of inferior organization, provisionally brought together under the term *Radiata*, if the position for which we strenuously contend can be satisfactorily established with respect to the three higher grand divisions of the animal kingdom, the mutual relations of the component members of which are tolerably understood; and proceed next to remark that neither of the four classes into which the *Vertebrata* are divided grade into each other, any more than those superior groups on which we have been commenting, each being distinct in itself, so that no one species is referred to either of them with the slightest hesitation; or if, in

some very few cases; as that of the *Ornithorhynchus*, an idea once prevailed that the essential characters of two classes were combined, it required only more accurate information and increased knowledge of the animal entirely to dispel the illusion, and to destroy altogether the fabulous and mistaken data upon which it was vainly asserted, for a while, by some credulous and superficial writers, to hold a dubious or mediate station.* Descending, however, in the scale, as the groups successively decrease in value, and consequently present less strongly-marked differences, it oftentimes becomes proportionally difficult to state their distinctive characters in general terms, to define them with precision and brevity, even though a practised ken may at once recognise them: it being on a combination of many characters that all natural groups are aggregated, the majority of which, but not necessarily the whole, are present in every comprised species; whence it commonly happens that different of these characters disappear in turn; so that (even in obvious groups) there may be none of general application. Any one character, therefore, which is peculiar to a group, or in so far peculiar that it does not occur in any proximate division, if applicable to all the members of that group—(which is very frequently the case, as natural groups, however low in the series, are apt to possess such characters)—acquires much value as a means of ready discrimina-

* It may be proper to remark here that we are quite aware of the important negative relations which the Ovoviviparous *Mammalia* collectively—viz. the *Marsupials* and *Monotremata* of Cuvier—bear to the Oviparous *Vertebrata* collectively, as opposed to the ordinary or Placental *Mammalia*. In the structure of the brain, for instance, the hemispheres of which are connected by a *corpus callosum* only in the Placental *Mammalia* (as recently ascertained by Professor Owen), there being no trace of this in the Ovoviviparous sub-class of *Mammalia*, any more than in the three Oviparous classes, while it is almost equally developed throughout the Placental sub-class, in the Beaver proportionally as much as in Man. Accordingly, then, there is no gradual linking from one to the other of these two great primary groups of *Mammalia* in the particular specified, any more than in various other characters unnecessary to detail; and we are led to recognise, therefore, a *dichotomous* sub-division of the class, analogous to that of the *Reptilia* into Ordinary and Batrachian Reptiles, or, in other words, two separate subordinate types of conformation, which do not pass into each other, and the inferior of which is less elevated above the Oviparous classes than the other. In like manner, the Ovoviviparous sub-class rigorously sub-divides into the orders *Marsupials* and *Monotremata* of Cuvier, the latter of which is again less highly organized than the other, and upon this negative principle is reduced to bear a still closer resemblance to the Oviparous classes generally, as particularly observable in the simplicity of the construction of the internal ear, &c.

tion, and so of precluding the necessity of any tedious circumlocution in rendering a specification of the exceptionable characters, even although, considered in a physiological point of view, it may be of trivial or unappreciable importance. From this actual want of physiological importance may, indeed, sometimes arise the constancy of such characters, which thus remain to indicate the obscured affinities of *aberrant* species, or those which deviate in other respects from the ordinary collective characters of their group, in consequence of secondary modifications (to be explained presently) having reference to some particular mode of life.

There are numerous groups, however, of all degrees of value, even the lowest assemblages of species, of which the integrity is conspicuously manifest, and the definition easy. Such groups, no matter how subordinate, may comprehend an immense number of species; and (to proceed now to the main difficulty of arriving at a sound classification) these species may be variously modified upon the same especial type, in adaptation to very different modes of life, so that, on a cursory view, their mutual affinity may not be apparent, the more especially as analogous modifications not unfrequently occur of different types, the species exhibiting which display, in consequence, much superficial resemblance, greater, of course, in proportion as the minor types on which they are respectively organized are more nearly allied together: thus, the analogous modifications of two ordinal types of the same class resemble each other, of necessity, more extensively than those of two different classes, &c. This latter apparent, but unintrinsic, similitude, is distinguished by the term *analogy*, as opposed to *affinity*.

But few of those extraordinary species of animals, which, at first sight, appear to be most widely removed from all others, are framed on an especial sub-type, or cognisable subordinate model of construction, of more than generic systematic value; being simply modifications of the same particular type on which certain other animals are organized, the exclusive characters of which are traceable on analytical scrutiny. Thus, the Giraffe is essentially a modified Deer, with persistent horns; the Flamingo a modified Lamirostral bird, or member of the Goose tribe, as intimated by its whole anatomy, internal as well as external. Man himself displays the same peculiar conformation as the three genera of Apes (*Trogodytes*, *Satyrs*, and *Hylobates*),* but extensively modified for

* These alone, of all the Anthropoid animals, have the liver divided as in Man, a vermiform appendage to the cœcum, a similar hyoid bone, &c. We

exclusively ground habits, a perfectly erect attitude, and the other attributes of humanity, wherein the different form and great development of his lower limbs may be resolved, together with other analogous variations. Even his amazingly developed brain is merely a difference in degree, a further carrying out of the same relative disparity which is observable in the brain of the Dog as compared with that of the Rabbit; not a difference of organic structure, acquired by the superaddition of component parts, such as is exemplified in the brains of all the Placental *Mammalia*, as compared with those of the rest of the *Vertebrata*. According to M. Geoffroy, "the brain of a young Ourang bears a very close similitude to that of a child; and the skull, also, might be taken, at an early age, for that of the latter, were it not for the development of the bones of the face. But it happens," continues that profound anatomist, "in consequence of its advance in age, that the brain ceases to enlarge, while its case continually increases. The latter becomes thickened, but in an unequal degree; enormous bony ridges appear, and the animal assumes a frightful aspect. When we compare the effects of age in Man and the Ourang, the difference is seen to be, that, in the latter, there is a superdevelopment of the osseous, muscular, and tegumentary systems, more towards the upper part than the lower, while the development of the brain is earlier arrested." The *vis formativa* simply takes a different direction, in order to develop the mechanism required to employ effectively the huge permanent canines; whence the organ and function of intelligence remain stationary at their transient condition in the child, but modified, of course, by the completion and agency of the incentives incidental to maturity.

To pursue this subject further, on the present occasion, would be irrelevant; but we may nevertheless venture to remark, that, consistently with the nature of those differences of physical conformation which the bodily frame of Man offers when compared with those of the restricted Apes (and indeed the rest of the *Quadrupana*, Cuv.), we can perceive no sufficient reason for distinguishing him as a separate order—*Bimana*, as opposed to *Quadrupana*; inasmuch as—however considerable may be the amount of those secondary or adaptive modifications which his structure so conspi-

recognise two other equivalent sub-types among the *Catarrhina* (Geof.), viz. that constituted by the two genera *Semnopithecus* and *Colobus*, and that by the remainder, or the sub-divisions *Cercopithecus*, *Cercocebus*, *Macacus*, *Inuus*, and *Cynocephalus*; each of these three higher divisions presenting exclusive characters, unnecessary to detail here.

cuously exhibits—even these have assuredly far less comprehensive influence on the entire organism, than the analogous modifications which the Seals, among the *Carnivora* (to select one of a multitude of instances), present in reference to their particular sphere of action ; and we are indisposed to concede that equivalent groups are ever simple modifications of each other, a circumstance which implies their non-distinctness, or unity as a special higher group, that cannot be *dismembered* upon such a principle, to whatever extent it may admit of *sub-division*. Conformably, then, with these premises, we hold the zoological station of Man to be as follows : after admitting him, as all must necessarily agree to do, into the kingdom and sub-kingdom *Animalia Vertebrata*, and class and sub-class *Mammalia Vivipara* or *Placentalia*, we conceive it necessary (omitting two succeeding gradations in the descending scale, as requiring a page or two of explanation) to include him among the *Cheiropoda*—or *Bimana* and *Quadrumana*, Cuv. united—then among the first of three divisions of the *Cheiropoda* indicated by M. Geoffroy, viz. the *Catarrhina*, *Platyrrhina*, and *Stépsirrhina* ; and, finally, in the first of three sub-divisions of the *Catarrhina*, consisting only of Man and the Apes, where we deem the genus *Homo* to be of equal systematic value with the three other genera or sub-genera (of the Chimpanzee, Ourangs, and Gibbons) collectively. Indeed, it may fairly be interrogated where, throughout the *systema naturæ*, does another instance occur of any genera so nearly allied, in total conformation, as Man is to the Chimpanzee and Ourangs, which genera are placed by modern physiologists in distinct *orders* ?*

* It is gratuitous to suppose that by these remarks, which may be resolved into a simple statement of facts, we seek to degrade the human race intellectually, as some very sensitive readers may be apt to imagine : all that we have endeavoured to shew is, that, as concerns the zoological system, which reposes on physical structure only, and the consequent physiological relations of different species of beings, the human subject presents a mere modification of the same particular minor sub-type, as that upon which the Apes only are besides organized ; the latter presenting the more ordinary or normal developments proper to the major group *Cheiropoda*, from which Man alone remarkably deviates, in consequence of a general adaptation to very peculiar habits and requirements, just as, in a less degree, the Giraffe differs from the rest of the Deer group, and from all the other horned Ruminants, in obvious reference to less anomalous peculiar habits. It being ordained, in brief, that a creature of flesh and blood should fulfil man's mundane destiny, such a creature was accordingly produced by modifying the particular model of construction of the *Vertebrata* generally, and of the Apes among the Placental *Mammalia* especially ; wherefore, we contend that, as Man is admitted among the *Vertebrata* in the system of zoological arrangement, so also is it

It is difficult to avoid digressing when treating on systematic natural history, as every statement requires its proof, which may involve the discussion of miscellaneous topics. We might next proceed to notice the excessive irregularity of groups of equal value, as shown by every conceivable mode of variation; viz. with respect to the number of species they may severally comprise, or may have comprised during former epochs of the earth's history; the number of separate minor types they may comprehend, which bears no proportion to that of species; also the amount of adaptive modification they may respectively exhibit, which again is equally indefinite, both as regards the number of species and sub-typical forms; and, lastly, the distribution of them in the horizontal as well as vertical series, which can as little be reduced to rule or proposition, some extensively represented types being strictly confined to particular regions or periods of time, while others are in either respect, or both, of general diffusion, or they are circumscribed at the present era, though formerly spread over a wide area, &c.* But, reserving these various subjects for future comment in the pages of *The Analyst*, we will close the present introductory remarks, into which we have almost unconsciously been led, by exemplifying the analogous modification of diverse types, or the relation of what is currently termed *analogy*, as distinguished from *affinity*. A remarkable illustration of this superficial similitude, induced by the correspondency of the *adaptive* modifications in reference to habit, such as occasions the *Cetacea* to assume the outside form of fishes, while they retain every essential characteristic of their class (*Mammalia*), is afforded in the class of birds, by the familiarly-known genera of the Swifts and the Swallows, which almost every systematist (and, we believe, without exception, every British systematist) has erred in placing together in zoological classification. The two genera in question are alike modified for seeking and capturing their insect prey on the wing; and are both furnished, therefore, with a remarkably wide gape, long wings, and generally a forked tail to assist in steering; while their legs (which are little used for progression) are short and inconspicuous. But here their whole similitude ceases; for they differ astonishingly in every detail of their conformation, which

necessary to include him in a particular group with the Apes, whatever may be the notions entertained of his distinctness in other respects, with which zoology has no sort of concern.

* Strange that, in the face of such conspicuously obvious facts, numerous zoologists should still contend for uniformity in the amount of variation of groups, as implied by their ternary, quinary, septenary systems, &c.!

is based on very distinct ordinal sub-types of form. The Swallow, framed on the same model as every singing-bird, retains all the very numerous peculiarities of structure observable throughout the exceedingly extensive group *Cantores* (Nobis); and neither in its skeleton, digestive nor vocal organs, &c., presents any essential difference from a Sparrow, Robin, or Tree-creeper, from which it varies only in minor adaptive modifications, such as the mere relative length of limbs, or the degrees of development of parts common to all. The Swift presents not a single one of those characters, but differs most materially in the structure of its whole skeleton and entire anatomy; its vocal apparatus, as in all the rest of its group (the *Streptitores*, Nobis), not being complicated by peculiar muscles, the function of which is to inflect the voice (as in every member of the group to which the Swallow appertains), it can only utter a discordant scream, while the Swallow modulates the tone of its voice, and *sings*. But, without entering further into a specification of internal distinctions, the exterior anatomy of the Swift and Swallow, even to the structure of any single feather, or as observable in the conformation of the bill and feet, in the number of tail-feathers (which, in the group to which the Swallow belongs, is *invariably* twelve; while in the Swifts, as in many other *Streptitores*, there are only ten), in short, in every imaginable particular that can be supposed to indicate *affinity* or physiological proximity, these two *analogous* genera have no better claim to rank in the same order of the class of birds, than the Whale has, in consequence of its external resemblance to a fish, to be included in the class of fishes. We are fully prepared to state the veritable affinities of both the Swift and Swallow, but it would be out of place to do so on this occasion.

Having now, we trust, sufficiently elucidated the nature of the systematic relations of animals in general, and controverted the prevalent notion that all groups are, to a certain extent, arbitrary, we will proceed to our task of extricating various genera from the entanglement of *analogy*, to assign them a position in accordance with their intrinsical *affinity*; and recur at length to the consideration of the small group specified at the commencement of this article, as one wherein the dental characters—so important generally, as indicative of the affinities of *Mammalia*—become a deceptive guide to the systematist who would place unlimited confidence in the validity of that as of any other single character, considered without reference to the rest of the organization. In the *Carnivora* of the illustrious Cuvier, we recognise four primary sub-types of form, viz.

Digitigrada, Cuv. as restricted to the species which possess a cæcum ; *Pinnigrada*, Blainv. or the Seals ; *Subplantigrada*, Nobis, or the Weasel and Badger tribe ; and *Plantigrada*, Cuv. as limited to the genera included by that naturalist, which have two tuberculated molars on each side of both jaws.

At the head of the *Digitigrada*, the Dogs and Foxes hold their station, as a very distinct family—*Canidæ* ; distinguished by a combination of various characters from all the rest, and (*inter alia*) to mention one of dichotomous application, by the peculiar spiral form of the cæcum. In the other *Digitigrada* the cæcum is comparatively short, and not spiral ; and the tongue, which in the *Canidæ* is soft and smooth, is armed (with the only known exception of *Proteles*) with reverted spinous papillæ. *Mos eorum copulandi mos canum non est*, in consequence of a difference of structure. Save in the Mangouste group (*Herpestidinae*), wherein the hairs of the fur are in general uniformly grizzled, very nearly all (and probably the whole of them when young) are more or less marked with a darker on a lighter tint of colouring ; and, with the final exception of a due proportion of the great genus *Felis*, they are all peculiar to the warm regions of the eastern hemisphere.

This last generalization applies properly to

THE CIVET FAMILY (*VIVERRIDÆ*),

Which comprehends all the species that are not Cats. They form an extremely natural group, the members of which are mostly distinguished by possessing an anal pouch more or less developed, or, in other words, a cavity or rudiment of the same, formed by two parallel and longitudinal folds of the skin, within which a number of pores open, from which an unctuous and odorous substance exudes, the product of peculiar glands. This substance constitutes, in certain species, the *civet* of commerce, a well-known perfume, formerly much more used than at present, when *must* and *ambergris* were unknown. It is necessary to divide this family into three sub-families ; and to the first of these, or

THE HYÆNA SUB-FAMILY (*Hyæniinae*),

We will now confine our attention, the two other sub-families being that of the Civets (*Viverrinae*), comprehending the genera Civet (*Viverra*), Genet (*Genetta*), Galet (*Cryptoprocta*, Ben., perhaps comprising *Eupleres*, Jourdan), Lisang (*Hemigalea*, Jour-

dan, including *Prionodon*, Horsf.), and Lutrel (*Cynogale*, Gray; *Limictis*, Blainville; *Potamophilus*, Kuhl); and that of the Mangoustes or Ichneumons (*Herpestidinae*), consisting of the Mangoustes (*Herpestes*), Surikate (*Ryzana*), and Mangué (*Crossarchus*), of the *Règne Animal*, with their numerous subsequently proposed divisions, and apparently the *Urva* of Mr. Hodgson. In these two latter sub-families the body and tail are generally lengthened, and the limbs short: but in the first sub-family, or Hyæna group, the body is never attenuated, but rather the reverse; the limbs are comparatively elongated, and the tail, which is more or less bushy, seldom reaches to the ground. The head is carried low, and has large or long and pointed ears. There are, in general, only four toes to each foot, but with an internal rudiment in place of a thumb to the anterior, which in one genus (*Proteles*) is more developed, and even furnished with a claw, as in all the *Canidae*. The fore-legs are more or less bent or crooked, turning outward at the wrist-joint; and the hinder brought forward in standing, which lowers the croup. Their figure is accordingly ungainly, and they have a limping gait when unexcited, and particularly when first rising up from repose. The greater number are eminently carrion-feeders, and prefer tainted flesh; are for the most part nocturnal, passing the day in caverns or burrows, often several together; some species of them prowling in concert, and all uttering the most dismal yells during their night rambles—a characteristic trait, in which they differ remarkably from the other *Viverridae* (which are particularly silent animals). Their dental characters present extraordinary diversities, which, however, are not difficult to comprehend; and the intestinal canal of at least two of the three genera (the soft parts of the other not having been described, so far, at least, as we have been able to ascertain), are exceedingly prolonged, more so than in any other terrene *Carnivora*. The few living species all inhabit Africa, to which, with one exception, they are peculiar. The most dog-like of them are

THE LYCAONS,

(*Lycaon*,* Brookes ; *Cynohyæna*, Blainville),

Which absolutely resemble the Dogs in their osteology, except that the anterior thumbs are rudimental, and seen only in the skeleton; and the nasal orifice (as in the Hyenas) is much larger. They have the same number of ribs (thirteen), and precisely the same dental characters,† possessing even the second inferior true molar, which occurs in no other *Digitigrada*, besides the *Canidae*: their cranial laminae even, which part the cerebrum from the cerebellum, are not more developed than in the Dogs; whereas, in all the other *Digitigrada*, they are much more developed: they have no glandular pouch near the anus, and it is probable that the tongue also is soft and smooth. On the other hand, however, their affinity to the Hyenas is so obvious, even to the style of colouring and markings of the skin, which in character resemble those of no *Canis*, that we find different naturalists of eminence including them in the distinct genus *Hyæna*. Of the anatomy of their soft parts we are uninformed; which is the more to be regretted, as there is every reason to suspect that therein will be found substantial proofs of the propriety of the arrangement here adopted, which the form of the cæcum alone would suffice to determine. This much is certain, that in coitu annexus non est, any more than in the Hyenas, which implies a structural difference from the *Canidae* in one of their most marked characters; and, Hyæna-like, we read of the South African *Lycaon*, that "When this animal begins to walk or run after having been at rest for a time, it appears weak or even lame in the hind legs, like a Hyæna: it never barks, but gives utterance to a shrill sound, resembling *ho-ho-ho-ho-ho*; the sounds being almost lost in each other."‡

* *Lycaon*, Pliny; a term applied to some canine animal from India, and derived from *Lyones*, *Lupus*, a Wolf. The animals which at present bear this generic title must not be confounded with the *Canis lycaon*, Linn. which refers to the Black Wolf of Europe, a very doubtful species. *Canis lycaon* of Fischer applies to one of them.

† Cuvier states, in his *Ossemens Fossiles*, that the small lobe in front of their false molars is rather more developed; but even this slight difference we are unable to perceive in a skull of the ordinary Cape species now before us.

‡ Dr. Andrew Smith's *African Zoology*, p. 43.

We believe this to be the true statement of the affinities of the *Lycaons*: that they are not, physiologically, more nearly related to the *Canidæ* than the other *Hyæninæ*; but that, in common with the *Dogs*, they present the normal characters of the higher group *Digitigrada*, from which all the other genera recede more or less, and the rest of the *Hyæninæ* very remarkably: those distinctions which especially characterize the minor type of *Canidæ*, will, we conceive, be vainly sought for in the anatomy of the *Lycaons*; the resemblance of which to the *Dogs* is rather of a negative kind, a relationship of analogy, and not affinity, in reference to similarity of habit.* It is not unlikely that certain large fossil species, resembling in like manner the *Canidæ*, should rather range in the present group.

The *Lycaons* are swift, long-legged animals, that hunt in organised packs, and by perseverance seldom fail to weary out the fleetest ruminants. Though principally nocturnal, they frequently pursue their prey by day; and individuals occasionally crouch in wait for it, concealed in any slight cover. Sparrman describes them as the most destructive to Sheep and Goats of the wild animals of South Africa, attacking not merely to allay their appetite, but killing or wounding as many as they can. Unlike the *Hyæna*, they appear to be endowed with much courage, and will sometimes engage in conflict with a *Dog* of superior strength. The packs hunt admirably in concert; and on one occasion, relates Sparrman, a number of them had the hardihood to return after a man on horseback, who had been pursuing them. They are well-formed for speed, standing higher on the legs than any wild species of *Canis*; have large, ample ears, and singularly variegated colouring, disposed in irregular patches; with head resembling that of a *Hyæna*, and similar thick neck (a common character of the *Viverridæ*); and they are restricted in their distribution to Africa, the principal habitat of the *Hyæninæ*.

There appear to be at least two species:—

* The second inferior true molar, if not found in the remaining *Digitigrada*, occurs in other species of the next higher group, *Carnivora*, as in the restricted *Plantigrada* generally.

THE MARBLED LYCAON,

(*L. marmoratus*, Nobis; *Canis pictus*, Ruppell; not *Hyæna picta* of Temminck, which refers to the other).

Inhabits Abyssinia, where it sometimes attacks man, and is much feared by the natives. Individuals, observes Dr. Ruppell, often crouch and lie in wait for small Mammalia. It is a very handsome animal, distinguished by its white ground-colour.

Length, to the tail, three feet and a half; the tail, sixteen inches: height at the shoulders above two feet, the croup lower. General colour, greyish-white; the chin black, which colour extends backwards on the sides of the neck, forming a streak which is said to be of constant occurrence; some large irregular patches of chestnut-brown, bordered with black, are variously disposed upon the body and limbs; and the terminal greater portion of the tail is white, surmounted by a narrow black ring, above which the colour is rufous. In both this and the following species, the terminal two-thirds of the tail are stated to be white invariably; but in a specimen of the ordinary Cape Lycaon, preserved in the museum of the Zoological Society, there is no white on the tail, which, however, is very unusual.

THE TORTOISESHELL LYCAON,

(*L. pictus*:* *Hyæna picta*, Temm.; *H. venatica*, Burchell; *Lycaon tricolor*, Brookes; *Canis lycaon*, Fischer),

Or *Wilde Houd* of the Cape colonists, is smaller, with a chestnut ground-colour: measuring about two feet high and three in length, exclusive of the tail. Its ground-colour is sandy-bay or ochreous-yellow, shaded with darker hairs; and irregularly blotched and brindled with black, mingled in various parts with patches of white. The legs are marked in the same manner, and tail similar to that of the other, forming a moderate sized and handsome brush in both species. The female is rather smaller and less brightly coloured, with generally fewer markings. Young seemingly undescribed.

* Dr. Smith has applied the specific appellation *pictus*, which belongs to this species, to the other in his *African Zoology*, calling the present one *Lycaon typicus*.

Dr. Smith observes, "The Cape farmers are acquainted with two species of what they denominate the *Wilde Hond*; the one they describe as larger, darker coloured, and much more ferocious than the other."* Sparrman had long previously published the same hearsay report, except that the smaller kind, according to his account, would seem to be the darker.†

The Tortoiseshell Lycaon is not uncommon in South Africa, and is troublesome at the frontier settlements near the Cape. Dr. Burchell, who brought a living specimen to this country, describes it as swift, fierce, and active. "Sheep and Oxen," he relates, "are particularly subject to its attacks; t he first openly, but the latter only by stealth, surprising them in their sleep, and suddenly biting off their tail, which the large opening and great muscular power of its jaws, enable it to do with ease." That respectable traveller, however, does not mention that he personally witnessed this act, although he saw cattle that were thus mutilated; and we are disposed, therefore, to suspect that the real culprit was the formidable Spotted Hyæna, the teeth and jaws of which are fully adequate to the performance of such a feat, which assuredly does not seem to be the case with those of the Tortoiseshell Lycaon, in which species they are less powerful than in a common Pointer. A Spotted Hyæna, if not under apprehension of being molested, would covertly attack the animal, by maiming it more severely; but these cunning and cowardly brutes would not improbably seize a hasty opportunity of snapping off the tail of a large animal, and immediately escape with it, if fearful of encountering danger.

Dr. Burchell's specimen continued ferocious, while chained up in his stable yard, for more than a year, and the man who fed it "dared never to venture his hand upon it." It, however, became familiar with a Dog, its companion. Another, formerly in the Tower menagerie, arrived with a young Cape Lion, with which it agreed perfectly till the Lion became too strong and rough in its play, when the Lycaon was associated with a Striped and two Spotted Hyænas, and all lived tolerably well together in the same den. If taken young, and suffered to run about, there is little doubt it might be readily domesticated; but those few individuals which we have seen in captivity were all savage and unsafe to

* *African Zoology*, p. 44.

† "Il y en a, dit-on, de deux especes; les uns plus grands, d'une couleur rougeâtre avec des taches noires; les autres moins grandes et plus bruns."—French edition of Sparrman's *Travels*, i., 207.

handle, even by their keepers. In travelling menageries, this animal is commonly termed the *Tortoiseshell Hyæna*.

We now pass to a genus, the dentition and general structure of which, in reference to a special object, exhibits remarkable modification.

THE HYÆNAS (*Hyæna*,* Storr),

Are the largest of the *Viverridæ*, few Dogs surpassing some of them in bulk and stature. Their prodigious strength of jaw, which far exceeds that of every other animal, is attained by a general modification of the parts in any way concerned to produce it. The muzzle is shortened, while the scissor-teeth† and false molars are much enlarged; hence the tuberculous grinders are necessarily both sacrificed in the lower jaw, and one of them in the upper, the other being exceedingly reduced, and not situate behind the scissor-tooth, where there is no room left for it but inward of its posterior extremity. The upper scissor-tooth has the usual great internal rooted tubercle; but the inferior—save in *H. vulgaris*—has none, presenting only two stout and keenly-cutting lobes, with merely a trace of the hindward tuberculous portion in *H. crocuta* and the fossil *H. spelæa*, which however is more developed in the others: the small retained true grinder is also most reduced in *H. crocuta*, and the extinct species adverted to. There are three anterior false molars each side of both jaws, the first, particularly above, comparatively small; the third above and second below, enormously bulky; the third inferior somewhat less, and the second above moderate; all forming stout cones, in which the secondary cusps merge almost to obliteration in *H. crocuta* and *H. spelæa*, less so in *H. brunnea*, and still less in *H. vulgaris*, the dentition of which is least typical of any. The external pair of superior incisive teeth are much enlarged and lengthened, and the incisors generally present broad opposing surfaces. In conformity with this increased strength and massiveness of the cutting molars, the jaws are necessarily stout in

* *Tauva*, a Sow; in reference, perhaps, to the arched and bristled back of the species known to the ancients, or possibly to its habit of scratching up the surface of the soil for bulbs.

† We use this expressive term to designate the carnivorous or cutting molar, styled the *carassier* by the French: this tooth is essentially the last of the anterior or false molars, peculiarly modified throughout the *Feræ*, Ida.

proportion ; and the sagittal crest is more developed than in any other animal. The neck, which is huge and furnished with prodigious muscles, is so fixed and rigid that its vertebræ occasionally become ankylosed : hence has originated the statement that these animals have only one bone in the neck. With the same total number of dorsal and lumbar vertebræ as the Dogs and *Lycaons*, the Hyænas have two additional pairs of ribs, which alters the relative number of those vertebræ, as commonly specified. All their ribs, moreover, are considerably stouter and more massive, as is the rest of the skeleton ; while the immense development of the spinal processes, still maintaining a reference to their excessive strength of jaw, occasions the arched form of the back, and contributes thus to impart their characteristic physiognomy. The tongue, assuming the character of the *Viverridæ* and *Felidæ* generally, is furnished with a circular collection of reverted spines, which enables them to lick the flesh from the bones of their prey ; and beneath the anus is situated a deep and glandular pouch, wherein a fetid matter is secreted, having the appearance and consistence of tallow.* These animals, finally, have a short and massive body, and long and crooked fore-limbs, which bend considerably at the wrist-joint ; their hind limbs are shorter, and claws adapted for scratching up the ground. The ears are large and directed forward ; the eyes full and brilliant, luminous in the dark, and incapable of bearing a strong light ; and the pituitary membrane of the internal nostrils (the orifice of which is large and broad in the cranium) amply developed.

Hyænas subsist, by preference, on corrupted flesh, and do not habitually exercise their power of masticating bones, except by day, leisurely, in their retreats. It is only in default of finding dead carcases that they attack living animals, when they commit dreadful havoc with the flocks, and even destroy cattle ; never venturing, however, to attack any creature that boldly confronts them, but threatening, and using all the grimace in their power to frighten them and induce them to flee, when the Hyæna is at once emboldened to pursue and seize them. Their plan is always to approach their intended victim unawares, and maim it by a gripe behind, repeating this cowardly procedure till it falls disabled. In no instance do they attack the feeblest prey openly and in front ; while their finely sensitive olfactory organ enables them to discover young or sleeping ani-

* From the existence of this cavity, the orifice of which is, however, transverse, the ancients were induced to believe that the Hyæna was hermaphrodite.

mals, which latter would be more liable to suffer from their depredations, if the continual melancholy howling of their enemy failed to convey a timely intimation of his approach. Even when rebuffed, however, they still linger, and watch their opportunity of making a covert attack, requiring corresponding vigilance on the part of the assailed. It is well that their courage is disproportionate to their formidable armature. They are restless, wandering beings, that prowl about from dusk till morning, and "make night hideous" with their incessant dismal howling, which only stops when they have at length discovered a carcass or other prey; and like the rest of the carrion-feeding mammalia, they disinter bodies from the grave, which has given rise to numerous superstitions connected with them. Cunning and suspicious in the extreme, they examine every object with which they are not perfectly familiar with the utmost distrust; and there are consequently no animals more difficult to outwit by snares.* They steal about human habitations where all is quiet within, and but too frequently gain admittance to the insecure dwellings of the Africans, when, disregarding calves and other tender live stock that are customarily brought in at night, and oftentimes passing by a fire, they mostly prefer to take an infant from the mother's kaross (doubtless on account of its being more easily removed), and this in such a gentle and cautious manner that the bereaved parent is commonly unconscious of her loss until the cries of her child have reached her from without, when a close prisoner in the jaws of the monster.† If an entrance cannot be

* "The more common methods employed against beasts of prey," writes Dr. A. Smith, of the Spotted Hyæna, "such as spring guns, traps, &c. do not succeed in his case. During his nocturnal wanderings, he minutely examines every object that presents itself to his notice with which he is not perfectly familiar; and if he see occasion to suspect that it can injure him he will turn back, and make his way in an opposite direction. Thus, cords or leathern thongs, which are often laid across the footpaths the Hyæna is accustomed to travel upon, and which are attached to the triggers of loaded guns, with the design that his contact with the thong may cause the discharge of the gun in his direction, are very carefully examined by him; and the usual result of his examination is, his deciding against trusting himself in contact with them. The Cape farmers have so often observed this result, that they now very rarely attempt his destruction by such means, but occasionally succeed by substituting for cords the delicate stems of creeping plants, which are regarded by him without suspicion until he has once actually suffered through them. Many other ingenious methods, suggested by the necessity of the case, have been adopted by the farmers for the destruction of Hyænas."—*Catalogue of the late African Museum.*

† Mr. Steedman, in his *Wanderings and Adventures in the Interior of South*

effected, they will carry off culinary utensils, or whatever may lie in their way that smells of food ; and the next morning, if the foot-steps of the beast be followed (as is customary on such occasions), the article may be found at the distance of perhaps a mile, hidden in some bush, or slightly buried in the soil. They feed additionally, however, and sometimes to a considerable extent, on bulbs, which they scratch up ; and so fastidious (according to the traveller Bruce) is the Striped Hyæna in the choice of this vegetable diet, that, on crushing them, it rejects all that manifest any stain or flavour of rottenness, devouring only the very finest. This fact of their resorting partly to vegetable regimen derives a particular interest from the circumstance of the almost total atrophy of the tuberculated portion of their cheek-teeth.

Of the Hyæna's amazing power of jaw, the following notice occurs in Dr. Buckland's *Reliquiæ Deluvianæ*, as observed by him in an individual of the Spotted species (*H. crocuta*). "The shin bone of an Ox being presented to this Hyæna, he began to bite off with his molar teeth large fragments from its upper extremity, and swallowed them whole as often as they were broken off. On his reaching the medullary cavity the bone split into angular fragments, many of which he caught up greedily, and swallowed entire. He went on cracking it till he had extracted all the marrow, licking out the lowest portion of it with his tongue : this done, he left untouched the lower condyle, which contains no marrow, and is very hard. * * * I gave the animal successively three shin bones of a Sheep ; he snapped them asunder in a moment, dividing each into two parts only, which he swallowed entire, without the smallest mastication. On the keeper putting a spar of wood two inches in diameter into his den, he cracked it in pieces as if it had

Africa, furnishes some most appalling accounts of the rapacity of the Spotted Hyæna. He states that Mr. Shepstone (a missionary), in a letter from Mamboland, relates that the nightly attacks of *Woloes*, as these animals are currently denominated in South Africa, have been very destructive among the children and youth ; for within a few months not fewer than forty instances came to his knowledge, wherein that beast had made a most dreadful havoc. Among other cases, Mr. Shepstone particularizes two, one that of a boy about ten years of age, and the other of a little girl about eight, who had been carried off by this species and wretchedly mangled, but were recovered by the attention of that gentleman and his companions. Niebuhr likewise informs us that the Striped Hyænas about Gamboon, in the season when the inhabitants sleep in the open air, snatch away children from the sides of their parents.—*Descr. Arabie*, 147, as quoted by Pennant.

been touchwood, and in a minute the whole was reduced to a mass of splinters. The power of his jaws far exceeded any animal force of the kind I ever saw exerted, and reminded me of nothing so much as a miner's crushing mill, or the scissors with which they cut off bars of iron or copper in the metal foundries."*

The strength of Hyænas, as manifested by their power of dragging away large carcasses, is strikingly exemplified in Col. Denham's narrative. At Kouka, that traveller relates that the Striped Hyænas (*Dhubba*), which were everywhere in legions, became so extremely ravenous that a large village had been attacked by them the night before his last visit to it, and absolutely carried by storm, notwithstanding defences nearly six feet high of branches of the prickly tulloh; and two Donkeys, whose flesh these animals are, according to that author, particularly fond of, were carried off, despite the efforts of the people. "We constantly," continues Col. Denham, "heard them close to the walls of our own town at night, and on a gate being left partly open they would enter, and carry off any unfortunate animal that they could find in the streets."† A single Striped Hyæna has been seen to make off with a negress, holding her by one leg; and running thus at a brisk pace, till she was fortunately rescued.‡

The natural character of Hyænas is, however, crafty in the extreme, but not bold; the slightest show of resistance sufficing generally to keep them aloof. It is only when unusually urged by hunger that the Striped species derives a confidence from acting in concert, doubtless the result of experience in some degree; and the solitary Spotted Hyæna, in all likelihood famished to desperation, has been known to attack and destroy even the Rhinoceros:§ they

* Dr. Knox, in a paper on the habits of these animals (*Wern. Trans.* iv, 363) states that he never knew them to crunch the bones of their prey, leaving the skeleton untouched. It nevertheless appears, however, from Dr. Smith's interesting paper on the *H. brunnea* (*Linn. Trans.* vol. xv), that they certainly do convey bones to the places of their diurnal retreat, and there feed on them, as commented upon by Dr. Buckland and others. We have already noticed, in the text, their propensity to carry off articles that are less digestible: among various authorities for which statement, see Capt. Sir J. Alexander's narrative of his late expedition of discovery into South Africa, vol. ii, 235.

† p. 187.

‡ Bosman, 295.

§ "I had thought," writes Sir J. Alexander, "that the African Rhinoceros had no superior, none that he need fear, save all-destroying Man; when my companion informed me that he had once found a Rhinoceros that had been

take advantage of any animal that manifests the least fear of them, but are singularly cowardly, and their fierceness results from necessity rather than choice, as they always evince a preference for what they find dead. The common notion that they are untameable, is devoid of foundation; for, as the late excellent naturalist, Mr. Bennett, remarked, (in his *Tower Menagerie*,) there is even scarcely any animal that submits with greater facility to the control of Man; and they are even capable of much attachment to persons who kindly treat them. We have seen both the Striped and Spotted Hyænas as gentle as Dogs, and freely handled them;* and they have been known to recognise a former master after several year's absence, and demonstrate as much joy on the occasion as could be evinced by any Dog. Sir J. Barrow even informs us, in his journey to the Cape, that the Spotted Hyæna has been tamed in the district of Schneuberg, where it is considered more serviceable for the chase than the Dog, and fully equal to that animal in intelligence and fidelity; and Col. Sykes observes of the Striped one (*Turrus* of the Mahrattas) that it is susceptible of the same domestication as a Dog.† Their awkward-looking proportions, however, unprepossessing aspect, and hatefully shrieking voice, must ever prevent them from becoming favourite domestic animals.

Dr. Andrew Smith narrates a curious fact, concerning the tallow-like secretion of the *nates*, of an individual of the Brown species (*H. brunnea*) which he long possessed in confinement, and which fact we have succeeded in ascertaining (after much fruitless inquiry) in the instances of both the others. The animal used to relieve itself of it by pressing that part always against a particular stone in its prison, when it issued forth rather copiously, and immediately congealed upon the stone. This substance appeared to be necessary, taken into the stomach, to promote digestion; for the Hyæna always resorted to it for that purpose after a meal, and regularly as it arose from rest.‡ It may be borne in mind that the intestines of these animals are unusually prolonged; though the same occurs in

just killed by a Hyæna. It had followed the giant brute for some time (as appeared by the foot-marks), and had bitten it behind with its terrible jaws, till the Rhinoceros fell and painfully died."—*Expedition II.*, 6.

* On such occasions, when fondled, they roll over upon the back like a Spaniel, generally first sinking upon the knees: and some individuals shriek and "howl with delight" most horribly when thus noticed.

† *Proceedings of the Zoological Society*, 1830, p. 31.

‡ *Linn. Trans.*, vol. xv.

the next genus (*Proteles*), which negatives the supposition that the digestion of bones required the medicament adverted to; while it is not altogether consonant with the reason assigned by Cuvier for the shortness of the intestinal canal in the *Carnivora* generally, "à cause de la nature substantielle de leurs aliments, et pour éviter la putréfaction que la chair éprouverait en séjournant trop long-temps dans un canal prolongé:" the Hyænas and Protle subsisting normally on flesh already putrifying, which might accordingly be inferred, from the augmentation of chyle-absorbing surface, to yield a proportionally reduced amount of nutriment.

There are three living species of this genus, very obviously distinct from each other.

THE SPOTTED HYÆNA

(*H. crocuta*, Schreber; *H. maculata*, Temm.; *H. capensis*, Desm.)

Is the largest of them, and also, as we have seen, the most typical, in so far as it deviates furthest from the ordinary dentition of the *Digitigrada*; while in other respects it is equally characteristic with its congeners. It is at once distinguished by its numerous round black or reddish brown spots, upon a pale fulvous ground, its broad ears, and inconspicuous mane: its whiskers are less developed than in the others.

Length, from nose to base of tail, four feet and a half; the tail, sixteen inches: height at the shoulder two feet eight inches, and at the croup about two feet three. General colour pale fulvous, inclining more or less to rufous, with numerous black and sometimes reddish-brown spots on the body and limbs, alike in no two individuals;* the hairs on the hind neck and withers forming a short reversed mane, and the lower two-thirds of the tail tufted with long black hairs; nose and muzzle black. "The ground colour," observes Dr. Smith, "in young individuals, is whitish, instead of pale fulvous; the spots are deep black, and the under parts quite black," instead of dull white. "In still younger ones, the spots are often not distinct, the surface exhibiting rather a brindled appearance; and in very young ones the fur is of a very dark, dull slate-colour, verging

* In Cuvier's *Ossemens Fossiles*, two varieties are indicated as respects the colouring; but we have vainly sought to identify these varieties by comparing the descriptions of them with specimens, which latter present great individual variation.

towards black :"^{*} a statement confirmed by some cubs recently brought forth in Mr. Wombwell's menagerie.

This animal is peculiar to South Africa, where it is numerous, and generally diffused ; being known as the *Wolf* or *Tiger Wolf* to the Cape colonists : it is also sometimes designated the *Laughing Hyæna*. When running about, it often doubles down the ears, which are then inconspicuous ; and frequently turns up the tail, like a Dog. Anecdotes of it abound in the writings of most South African travellers.

"It seldom," remarks Dr. Smith, "if ever, moves abroad during the day, but passes that period in a state of repose, either in holes of the ground, or in retired situations densely covered with brush. Towards night-fall his howlings are regularly heard, announcing to the various animals the approach of their voracious enemy, and thus enabling many of them to escape his wiles. The propensity this beast has for howling seems, therefore, to be disadvantageous to him ; and if his almost continual noise be not intended to put the animals upon which he preys upon their guard, its actual purpose is scarcely conceivable," unless it be to inspire them with terror, and thus to facilitate his attacks. "Some have surmised it to be his call to creatures of his own species ; but that this is not the case is certain from the fact that Hyænas are heard to utter their supposed call even while separating from each other farther and farther as each cry is uttered ; in addition to which, it may be remarked that it is contrary to the habit of this animal to hunt in company, or even to congregate in great numbers, save when assembled by the temptation of abundance of carrion. A still further proof that the Hyæna's cry is not a friendly call to his own species, may be found in the fact that when individual Hyænas have found a dead animal, they cease to utter their melancholy howl, as if in fear of calling participators of the feast.

"Till lately," adds the author, in conclusion of a very interesting account,† "Hyænas were in the habit of paying nightly visits to the streets of Cape Town, and were regarded as very useful in carrying away the animal refuse, which might otherwise have been disagreeable. This, however, no longer occurs, partly, perhaps, from better regulations now existing in the town, and partly from the number of these animals having very greatly decreased. Even now, however, individual Hyænas occasionally approach the town, and their howlings are sometimes heard under Table Mountain, and in other direc-

^{*} *African Zoology*, p. 55.

† Quoted in the *Penny Cyclopædia*, Art. Hyæna.

VOL. X., NO. XXVIII.

tions, during the nights. In the countries inhabited by the Caffres they are very numerous and daring, generally approaching the villages during the night, and attempting, either by force or stratagem, to pass the wattles by which the houses are defended, when, if successful, they not unfrequently carry off some young child of the family. Scars and marks in different parts of the body often testify to the traveller how dangerous a foe the natives have in this animal.*

THE ORDINARY FOSSIL HYÆNA OF EUROPE

(*H. spelæa*, Goldfuss),†

Was very closely allied to the preceding species, but still larger: its remains occur rather plentifully in cavern deposits, in various parts of Europe, including the British isles. No bones of this genus have hitherto been found in America, where the geographical distribution of the living *Viverridæ* renders it probable that Hyænas never existed.‡

The rest of the living *Hyæninæ* have a conspicuous dorsal mane, and amazingly stout wiry moustaches. Their ears are long and pointed, and they are marked with dark transverse stripes.

THE BROWN HYÆNA,

(*H. brunnea*, Thunberg; *H. villosa*, Smith; *H. fusca*, Desm.; also quoted by Lesson as *H. rufa*, Cuv.)

Is the second Cape species, and intermediate in its dentition to the two other living Hyænas; differing from the Spotted in the greater de-

* *Catalogue of the late South African Museum.*

† Various other extinct species have been described, as *H. spelæa major*, Goldfuss; *H. prisca* (*Hyène rayée fossile*), M. de Serres; *H. intermedia*, ibid.; *H. Perrieri*, Brav. Croiz. and Job; *H. avernensis*, ibid.; and *H. dubia*, ibid.: the whole of these European.

‡ The genus *Bassaris* of Lichtenstein, ranged by De Blainville and others near the Musangs (*Paradoxurus*), appears to be a true Plantigrade, allied to the Racoons and Coatimondis; an idea first suggested to us by our valued friend Mr. Waterhouse, the able curator of the Zoological Society's museum. Since penning this, we have met with a brief notice of the anatomy of *Bassaris*, by Prof. de Blainville, in the *Annales d'Anatomie et Physiologie* for February, 1839, p. 58, which completely sets at rest the question, in our mind, of the animal being a true Plantigrade."

velopment of the secondary lobes of its false molars, in the superior size of the small retained upper true molar, and in the existence of a well-marked tuberculous portion behind the lower scissor-tooth ; and from the Striped in the greater proportionate bulk of its molars generally, and the absence of an inner tubercle to the lower scissor-tooth, which is strongly marked in that species.* Its size is inferior to that of either, and externally it is at once distinguished by the very long, hanging brown hair, which clothes its back and sides, the limbs being barred with black. The largest specimen of several that we possess notes of, measured, according to Mr. Steedman, four feet four inches from nose to base of tail, the tail nine inches and a half, or with its hair one foot two ; height at the shoulder two feet four, and two feet at the croup. "Hair of the whole body remarkably long, coarse, and shaggy," measuring six inches and upwards ; "but short and crisp on the head, ears, and extremities. General colour of the head, body, and extremities, grizzled brown, from the long hairs being greyish towards the roots and brown at the points, marked on the sides and hips with large but rather indistinct transverse bands, of a deep vinous-brown colour. The legs, particularly the fore, are marked with transverse black bands, much more distinct and apparent than those on the body. Tail thickly covered with longer hair than in the Spotted Hyæna, of an uniform deep brown. The fore-arms and thighs are darker than the other parts of the animal ; and a large collar of dirty, yellowish-white surrounds the throat and extends up the sides of the neck, occupying the entire space between the setting on of the head and the shoulders. Under each eye there is a large irregular black patch ; the chin also is black, and a narrow band of the same colour marks the junction of the head and neck, bordered by the dirty-white collar before mentioned. The individual was aged, all the teeth being much worn. A cub, nineteen inches in length, exhibited the same general characters, except that the hair was shorter and more woolly : the dark transverse bands on the sides and hips

* We are unaware that the dentition of the present animal has previously been described ; nor is it now absolutely certain that the right species is referred to. We were perfectly familiar with the dental characters of *H. crocuta* and *H. vulgaris*, however, when, in Mr. Yarrell's collection, a solitary Hyæna's skull excited our attention, as differing from all that we had ever previously examined ; and as the smaller size of this specimen accords with *H. brunnea*, while there is no information of any additional recent species, there can be extremely little doubt of its belonging to it. Mr. Yarrell was quite unacquainted with the history of his specimen.

were little, if at all, more distinct, and the dirty-white collar was equally conspicuous."*

This animal is the *Straand-Wolf* or *Straand-Jut* of the Cape colonists, and is neither so common nor so generally diffused as the Spotted Hyænas; but appears to extend further northward,† the specimen in the Zoological Society's Museum having been received from near the Gambia. "It is well known," writes Mr. Steedman, "to the farmers who reside along the southern shores near the Cape, where it feeds upon carrion, and whatever is occasionally thrown up by the ocean, as dead Whales, &c. But when food becomes scarce it commits great depredations upon the flocks and herds of the colonists, by whom its incursions are much dreaded. A very fine specimen" (described in the foregoing paragraph) "that had been just shot by a farmer, had destroyed three large calves belonging to him. I was informed that it is a remarkably cunning animal, retiring to a considerable distance from the scene of its depredations to elude pursuit, and concealing itself, during the day-time, in the mountains, or in the thick bush, which extends in large patches throughout the sandy district in which it is usually found. The cub I procured was one of three obtained alive in the Nieuvelde mountains, a considerable distance in the interior of the country, which shews that this species is not so strictly confined to the vicinity of the sea-coast as its colonial name would apply, or as the accounts of travellers would lead us to imagine."

An instructive account of the Brown Hyæna, by Dr. Andrew Smith, the enterprising African traveller, to whom zoology has recently been so much indebted, is published in the 15th volume of the *Transactions of the Linnæan Society*, where it is stated that "it seldom attacks the larger quadrupeds, and it is only Sheep, Goats, and such like animals, that suffer from its predatory nature." A captive individual which that naturalist long possessed, was always unusually active during rain, and habitually avoided warmth: its disposition was exceedingly cunning and distrustful, and it shewed an anxiety to carry off things of all description to its place of retreat, which were not without difficulty regained; it thus concealed its food, and is stated to have seized on bones in preference to flesh. Both this

* Steedman's *Wanderings in South Africa*, ii., 114.

† Since penning the above, we have found a notice, in the *Annales des Sciences Naturelles*, (tom. v., p. 227, new series), of the Spotted Hyæna being met with in Senegal. Cuvier remarks, in his *Ossements Fossiles*, that a figure of it occurs in an ancient manuscript of Opplan.

and the *H. crocuta*, narrates Dr. Smith, unequivocally, are in the habit of carrying bones to their wild retreats, and of employing themselves in crushing them during the day. The captive individual adverted to killed and devoured a young Dog, its companion.

THE STRIPED HYÆNA

(*H. vulgaris*, Desm. ; *H. antiquorum*, Temm. ; *H. striata*, Zimm. ;

Canis hyæna, of Linnæus).

Is the only existing member of the sub-family met with out of Africa, being found from India to Abyssinia and Senegal, inclusive. Bruce thought, however, that he could distinguish the Hyæna of Syria from that of Barbary, by a more Dog-like muzzle. It is readily known by the distinct black stripes crossing the body and limbs, and conspicuous thick mane continued along the whole spine ; a great black space on the fore-neck, that recalls to mind the Civets.

Size, that of a large Dog, but shorter-bodied, or about four feet four inches from snout to base of tail ; the tail eleven inches more, or with its hair one foot five ; height at the shoulders two feet four, and at the croup about three inches less.* Colour uniform pale brownish-grey, or somewhat darker above than beneath, with irregular black transverse stripes on the body and limbs, disposed obliquely on the shoulders and haunches. Front of the neck, outside of the ears, and muzzle black ; and a thick bushy mane, composed of hairs from six to nine inches long (increasing in length backward), and hanging over on each side, along the whole nape and spine till lost in the tail-brush, and which is erected when the animal is threatening. The mane and tail both marked with blackish

* Bruce mentions one that measured five feet nine inches from muzzle to tail ; but none have been seen in Europe approaching those dimensions. He must have meant the total length to the end of the tail-tuft, which just agrees with the admeasurements above given, taken from a fine and well-stuffed specimen, exceedingly well mounted, in the museum of the Zoological Society. The dimensions above given by Bruce are copied from Cuvier's *Ossemens Fossiles* ; but we find, on reference to the Appendix to Bruce's Travels, which we had no opportunity of referring to when the above was written, that that author specifies his admeasurement from nose to tail, insisting much on the great size of a particular breed of Striped Hyænas, of which the specimen adverted to was an example, and which breed may yet prove to be specifically different.

spots and stripes, variously and irregularly placed. The body-markings differ considerably in intensity in different individuals, and we have seen one wherein the stripes were so much broken and scattered as scarcely to deserve the name.

This widely-diffused species about Mount Libanus, Syria, the north of Asia, and in the vicinity of Algiers, is known, according to Bruce, to feed mostly upon large succulent bulbs, as those of the *Fritillaria*; and that author informs us that he has known large spaces of fields turned up by it to get at onions and other roots, which are chosen with such care, that, after peeling them, all such are rejected as are tinged with rottenness, as before noticed. Shaw, the traveller, likewise asserts, that, in default of other food, it will eat the roots of plants, and will feed on the tender shoots of palms. He speaks of it as an unsociable animal, solitary, and inhabiting the chasms of the rocks. In Abyssinia, and other hot climates, however, the Striped Hyæna becomes much more carnivorous, and a perfect pest from its abundance, which is induced, in some degree, by the unclean habits of the inhabitants, who leave the Hyænas to perform the office of scavengers in removing a vast quantity of decaying animal matter. So far they are indeed useful, but their multiplication is thus obviously encouraged to a noxious extent; for they resort to the towns and villages in multitudes at dusk, destroy every domestic animal to which they can gain access, and if they do not habitually attack man, from whom they are rather disposed to flee, still it is not exactly pleasant to hear them grunting all around, to encounter them at every turn, or to be awoken, as the traveller Bruce was on one occasion, by something moving under his bed, to be greeted by the night-sparkling glare of the eyes of one of these animals, trying to make off with his bunch of candles! We have never heard of either this or the Spotted Hyæna injuring a grown human being under such circumstances, but infants are particularly subject to be carried off by them. The statement that the Striped Hyæna inhabits South Africa rests on the solitary testimony of Levaillant, who appears to have met with it in the country of the Great Namaquas, towards the tropic of Capricorn.* It certainly does not occur towards the Cape.

We have next to describe a very singular little animal, the denti-

* See the narrative of his second expedition, vol. iii., 68, English translation. He distinguishes all three species.

tion of which is sufficiently curious as compared with all the rest of the *Carnivora*, but particularly so in reference to the *Hyaena* genus, to which, in other respects, it is proximately allied.

THE PROTLE (*Proteles*,* Is. Geof.),

The incisors and canines of which present no deviation from the ordinary form, and are duly developed, though the exterior incisors are not large; but the complement of molars is deficient, and such as are present appear as though their development had been prematurely arrested at an early stage.

There are, in all, four cheek-teeth on each side above, of very small size, and separated from each other, especially the hindmost, which presents a tuberculous surface, having two tubercles; the three others being pointed false molars, and simply conical. In the lower jaw there are two analogous false molars, which lock on either side of the middle one above, the second having a slight trace of a posterior process; and situate much further backward, but anteriorly to the upper true molar, is a third below, having two little points, and also a small tubercle. The scissor-teeth are altogether wanting; and of what use the other diminutive molars can be to the animal is assuredly not obvious; Dr. Smith, indeed, asserts that they often fall out at an early age.† The incisors belonging to the only skull we have seen were singularly worn down, as if much more employed by this than any other of the *Carnivora*.

In other respects, the Protle is almost a miniature striped *Hyaena*, but with more slender limbs, a developed fifth toe on the fore-feet, a smooth tongue, smaller head, and finer brushy tail; and not only without the two additional pairs of ribs, but having one pair less than the *Lycaons* and *Dogs*: the anal pouch, with its transverse aperture, is precisely similar. Only one species is known,

THE CRESTED PROTLE,

(*Pr. cristatus*, Auct.; *Pr. Lalandii*, Is. Geof.; *Viverra Hyaenoides*, Cuv., originally),

Or *Aard-Wolf* ("earth-wolf") and *Nadrou Jackal*, of the Cape colonists. It is less than a common Fox, of a greyish colour, with

* *Προτελις*, undeveloped; in reference to the structure of the molars.

† *African Zoology*, p. 48.

fewer transverse streaks than the Striped Hyæna, a long, thick mane, particularly upon the shoulders (where the hairs measure six inches in length), and fine brushy tail, as before remarked. We will copy Dr. Andrew Smith's more particular description of it.

"Length, from nose to base of tail, three feet; of tail, thirteen inches: height at the shoulder seventeen inches, at croup about fifteen. Muzzle black, thinly covered with some fine reddish fur; hair between the eyes nearly black; the upper and lateral parts of the head pencilled black and reddish-white, each hair being annulated with these colours; under surface of the lower jaw black; ears with a thin covering of blackish hairs externally, their inner surface bare, excepting the margins, which are covered with a whitish hair. Woolly hair of the neck and body very abundant; and yellowish-white, clouded with subrufous towards the surface, blackish towards the body: bristly hairs abundant on the upper part of the neck and centre of the back, where they form the mane, and are annulated black and white; on the sides they are scanty, yellowish-white, and much longer than the woolly hair. On each side of the neck, a little below the mane, a longitudinal blackish stripe; on the body and shoulders a number of vertical stripes; and on the extremities towards the body several transverse bands of the same colour, on a ground-tint similar to that of the body. Lower parts of the extremities deep black in front, and on the sides; rufous-white behind: throat, breast, and belly, yellowish-white: tail, towards its root, variegated yellowish-white and black; the last two-thirds appearing nearly black, the hairs being only yellowish-white towards their bases. In the female, the woolly hair has scarcely any of the subrufous tints which are abundant in old males, and the mane is not so dark: indeed, all the colours may be stated to be of a lighter hue."^{*} The young, when very small, resemble the adults.

This animal has hitherto been met with principally in South Africa, where, according to Dr. Smith, it is not very abundant; but it appears that a specimen has likewise been killed in Upper Egypt,[†] though whether of the exact same species remains to be ascertained. Should it prove so, which is not generally the case with the quadrupeds of North and South Africa, the probable inference would be, that its principal habitat is within the tropics.

It is a very timid animal, and social with its own kind. "Under-

^{*} *African Zoology*, p. 48.

[†] M. Is. Geof. St. Hilaire, *Annales des Sciences Naturelles*, tom. iv, 262, new series.

standing it to be rather numerous," writes Mr. Steedman, "in the neighbourhood of the Vanstaden River" (near Algoa Bay), "and being desirous of obtaining a specimen, I accompanied a farmer in search of the burrows. We soon discovered the *spoor* or track of these animals quite fresh; and following it for some distance over sandy hillocks thickly covered with bushes, we at length found their retreat, which, to all appearance, they had recently quitted. It was a subterraneous cave, with several holes, each leading to one principal cell. It seemed that these holes were intended to facilitate escape in case of attack, the animal being extremely timid. In proof of this, I may mention the circumstance of the farmer who accompanied me having, upon one occasion, ventured to take away the young, without any apprehension of being interrupted by the old ones, which had fled at his approach. After a day spent in fruitless search, we were unable to get even a sight of this curious animal. The farmer informed me that, on moonlight nights, he had frequently seen as many as ten or fifteen of them together, prowling among the hills in pursuit of prey, and raising a most frightful howl."* Levaillant mentions occasionally distinguishing the howl of some quadruped, besides that of the Hyæna and that of the Cape Jackal, about his encampments at night, which his Hot-tentots informed him was the *Aard-Wolf*: whatever it might be, he adds, it fed along with the Jackals and Hyænas.†

The Protle is stated to prey on very young Lambs, and to attack the massive fatty protuberance on the tails of the African Sheep.‡ No doubt it also feeds on very putrid carrion, so far decomposed as to require no further division than can be effected by tugging at it with the canines; a supposition which, indeed, is favoured by the circumstance of the lower canines being a little curved. Its dental system must, of course, incapacitate it for severing flesh, except that of exceedingly tender young animals.

Having now disposed of all the known existing species of *Hyæninae*, and described them somewhat in detail, we trust that we have also disposed of the statement that the teeth constitute the essential character of *Mammalia*, upon which the group might even be exclusively constructed; inasmuch as it appears that the dental system is subject to adaptive modifications which might occur alike

* *Wanderings in South Africa*, vol. i., p. 308.

† Narrative of second expedition, English translation, ii., 323.

‡ *Is. Geof. St. Hilaire*.

in genera not especially allied together. Thus, the Hyænas and Cats present a somewhat *analogous* dentition, in consequence of the abbreviation of the muzzle, coincident with a development of the scissor-teeth, displacing the tuberculous molars, so that one only is retained above and none below, and that single one is much reduced in size, presenting a narrow transverse form at most. The Hyænas and Cats have, accordingly, been erroneously approximated, as they possess little else in common that does not apply to the *Digitigrada* generally. The Hyænas, moreover, pertaining to a natural family—the *Viverrida*—the members of which are only partly carnivorous, retain a vegetable-feeding propensity, notwithstanding the loss of the tuberculous portion of their grinders; which renders it necessary to modify another general proposition, to the effect that the teeth determine the regimen: the truth being, that the ordained regimen determined the modification of the teeth in the first instance, though, to whatever extent that modification may be carried, in species framed on any particular sub-type, a hankering after the normal regimen of that sub-typical group generally will still be manifested; of which the Hyænas afford, perhaps, as remarkable an example as could be adduced.*

* The foregoing descriptions of the *Hyænina* are somewhat abridged from a manuscript general work on the Mammalia, by the author of the *Sketches*, which is now in a very forward state, and will be published in a single thick octavo volume, as soon as he has sufficiently studied the contents of the principal continental museums. A similar work on Birds is likewise in progress, which will probably extend to two volumes.

[Page 52, last line, for *Eupleres*, Jourdan, read *Eupleres*, Doyère; and append, as a note, the following: Since writing the above, we have seen the figure and description of this animal published in the *Annales des Sciences Naturelles* (new series, vol. iv, p. 270), and are satisfied that it is a true member of the *Insectivora*, Cuv. allied to *Tupaia* and *Gymnura*. In approximating it to *Cryptoprocta*, we were misled by Prof. de Blainville's arrangement of the *Carnivora*, in vol. viii. of the same work, p. 279.]

THE MONK; A STORY OF THE ALPS.

THE pass of the great St. Bernard has been more than once recorded in the page of history, as the scene where persevering enterprise, combined with daring ambition, and supported by bold execution, was enabled to conquer apparently insurmountable obstacles, and to render vain even the barriers opposed by nature to the completion of man's designs; and the celebrated Hospice, situated near the summit of the mountain, has for ages been a perpetuating monument of the power of generous sympathy and warm benevolence to defy the chills of perennial snows, and the desolation of dreary solitude.

Though this pass is devoid of many of the magnificent features that characterize some other of the Alpine tracts, yet its wild and rugged paths cannot be traversed without feelings of deep interest; the memory will revert to the period when Hannibal* led his Carthaginian warriors over the stupendous Alps, as some maintain, by this pass, and poured down his legions with resistless fury on the richly cultivated plains of Lombardy, then teeming with wealth and luxury that, ere long, was to enervate even the hardy veterans of Africa, and compel them to yield to the magic spell of the soft skies, the cooling fountains, and the love-breathing groves of Italy's genial clime. Since that period small bodies of troops have occasionally crossed the St. Bernard; but the transit of forty thousand

* The ascent of the Alps by Hannibal and his army is described as having occupied nine days. In addition to the obstacles presented to their advance by the rugged nature of the ground, the hardy mountaineers disputed every pass with them, and frequently broke their disciplined ranks, or obliged them to retreat; but at length, by stratagem and perseverance, the Carthaginian general succeeded in gaining the summit of the mountain, where he permitted the soldiers to rest two days, after which they commenced the descent, which was found extremely difficult, owing to the steepness of the declivity. At one point a precipice of one thousand feet in depth seemed to bar their farther progress; and here it was that the well-known artifice of heating the rocks by fire and dissolving them with vinegar, was resorted to. From whence the vinegar was obtained, and by what solvent property it was enabled to reduce primitive granite, the historian omits to mention; possibly the effervescing wine, for which the valley of Aosta is famous, may be here signified. This, if given to the soldiers, might, by its refreshing properties, have stimulated their exertion, and enabled them to overcome the opposing barriers.

regularly disciplined soldiers, with cavalry, baggage, and two hundred pieces of artillery over this pass, was reserved for the giant genius and master spirit of Napoleon to accomplish.

It is impossible for any one to form even a faint idea of the magnitude of this undertaking, without visiting its scene. The broken nature of the ground, the narrowness of the path, the abrupt precipices, and the deep beds of torrents to be passed over, with the snow, which, at that early season of the year (in April) was many feet thick for a considerable part of the route, would all seem to render the undertaking impracticable ; but an end was to be gained, and this end (if in human power) Napoleon determined should be effected. His design succeeded ; he accomplished the pass, and the field of Marengo bears bloody evidence how completely the *manœuvre* succeeded.

During the early ages of Christianity great numbers of devotees, performing pilgrimages, used to pass into Italy by this road ; and it was principally to aid and relieve these absolution-seeking sinners that the Hospice established by Bernard, about the tenth century, was founded. The monks of this monastery are of the order of St. Augustine ; their self-devotion, in thus voluntarily residing, throughout the perpetual winters of this sterile wilderness, for the purpose of rendering assistance to weary travellers of whatever description or country, their active zeal, their benevolent charity, and, above all, their indefatigable exertions in rescuing from destruction the unfortunate wayfarer who may have been overwhelmed by the snow-storm, cannot fail to call for universal gratitude and admiration. Formerly the monks were possessed of considerable property, and their funds were amply sufficient to entertain gratuitously all the travellers who took shelter under their hospitable roof ; but the spoliation consequent upon revolutionary changes in the states and empires where their lands lay, has materially depreciated their revenues ; and at the present time they gladly receive any contributions which generosity or philanthropy may dictate to the visitor.

During a short stay in Switzerland, in the year 18—, I had occasion to visit the Hospice of St. Bernard, and to become personally acquainted with some of its inmates.

It was on a bright morning in the early part of the month of November—(a month sometimes unjustly libelled ; for, notwithstanding its general gloom, it is not always productive of clouds and despondence alone ; there are occasionally cheering gleams, bright oases, and sunny hours, when nature seems to throw off the veil of mist that has been spread over her beautiful face, and to smile even

on the "seared and yellow leaves" which lie scattered on her bosom, whilst the birds sing blithely as in the first break of early spring)—I set out for the small town of Martigny, with the intention of resting one night at the Hospice, and proceeding the next day on my journey into Italy. I took with me two stout peasants to act as guides; we were all mounted on mules, that being the most convenient mode of ascending the pass. The extraordinary sagacity and more than human foresight of these animals, when in the perils of the mountain tracts, render their services of the highest value to the traveller. It was advisable to take every precaution; for though the weather was now clear and open, this could not be relied on beyond the present hour, particularly at such an advanced season of the year. Should a storm overtake the traveller whilst on his way, unless he has some person thoroughly acquainted with the mountain paths to direct him, there is every danger of losing the track and perishing in the storm.

The road, for some time, passes along the banks of the river Drance, which rushes impetuously down a narrow rocky channel, sometimes dashing over perpendicular ledges many feet in height, or foaming amongst the broken fragments of stone which everywhere strew its bed. We halted for three hours at the village of Liddes, in order to recruit the mules for the remaining part of the ascent, which, from this place, becomes steeper and more broken. We here learned that a considerable quantity of snow had fallen during the previous days, and that there was much difficulty and some danger in proceeding; but as I was determined, if possible, to reach the Hospice that evening, and it was now but mid-day, I procured another guide to accompany us on foot, and assist in case of any accident; after replenishing our brandy-flasks, we set out with stout hearts and warm cloaks on our perilous journey. The road lies up a deep valley bounded on either side by bold rocks and snow-covered peaks, from which the sunbeams were reflected with almost painful vividness. After leaving the hamlet of St. Pierre, all vestiges of habitation cease; the paths wind for a short distance through a forest of pine and larch, which, however, soon ceases, and the alpine rose, a species of *Rhododendron*, alone blooms in the solitude; the stream assumes the character of a brawling torrent; the path becomes narrow and rugged; and the whole scene presents as wild and desolate an appearance as it is possible to imagine. After about two leagues we passed a small chalet, where, in the summer, milk and other refreshments may be procured. We now began to find the journey extremely troublesome, and made but slow pro-

gress ; the snow was so soft, owing to its recent fall, that the mules sank in above their knees at every step. We were, therefore, obliged to dismount, and proceed on foot with the assistance of long staves, with which we had provided ourselves. In the mean time, the sun was obscured by dense clouds, the sky became overcast, and a low moaning noise, like the sound of the distant ocean, occasionally broke on the otherwise death-like stillness. There was a chilling gloom cast around every object, respiration became difficult and oppressive, from the attenuated state of the atmosphere. The walking was toilsome and difficult in the extreme, frequently as much ground being lost by one unfortunate slip, as had required several steps to gain.

We had advanced in this manner for some time in silence, when I felt a smarting, prickling sensation on my face, and I turned to one of the guides to inquire its meaning. He pointed to the mules, and I observed that the vacant saddles were covered with small white particles. "It is the snow," he said, "and the storm is gathering fearfully fast about us. Do you see yon peak?" I strained my eyes in the direction where he pointed, and saw, at a considerable distance, a craggy point, which was scarcely discernible through the increasing darkness. "So long as we can descry that point we are safe," he continued, "but we must lose no time." "How far are we from the convent?" I asked. "A *strong* league yet," he replied; "but I have traversed the way often, and know it well, every spot is familiar to me by day and night." He said this in a seemingly careless manner, but there was a degree of anxiety about his tone and gesture which did not escape my notice.

The speaker was a tall, athletic man, about forty years of age. From the strength and symmetry of his figure he seemed formed to endure hardship and to achieve enterprise; his countenance was open and intelligent, and his broad forehead and dauntless eye at once bespoke courage and daring, combined with prudence and foresight. I had had much conversation with him during the day, and had learned some of his history. He was a native of Thun, and had, in common with all the Swiss peasantry, that devoted attachment to country and home which has become proverbial. During his early life he had passed through most of the European states, in the capacity of courier to different travellers, and possessed a good deal of information, with a superiority of air and language to the generality of his class. I felt the utmost confidence and reliance in this man's knowledge and guidance, for faithfulness to trust has ever been the characteristic of the Swiss nation. The sequel proved

that I had not formed a wrong estimate of his character. The other person we brought from Martigny proved to be quite a youth, and but little acquainted with the pass. He began to show signs of fatigue and exhaustion soon after we reached the snow, and was now incapable of proceeding without assistance. His frequent request was to sit down and rest, but this would have been at once leaving him to his fate ; for when the feeling of drowsiness is yielded to in order to get a little temporary ease, the unfortunate victim presently falls into a deep sleep, from which he never more awakes. We therefore urged him to proceed, I supporting him on one side, and the man who had accompanied us from St. Pierre occasionally aiding both, while Stierry, our experienced guide, kept a few paces in advance. To the exertion required in sustaining my burden, and the excitement consequent upon it, I was probably indebted for my life. That benumbing sensation of the extremities which is generally the forerunner of complete paralysis, had begun to overpower me ; and it was only by a very strong effort that I could throw it off to take an active part in our present situation, which every moment became more hazardous. The light had nearly faded, and an impenetrable veil was fast shrouding the heavens, the breeze came in fitful gusts, and the icy spicules increased in quantity. I looked towards the beacon of our hope ; it was still visible through the dimness, but heavy clouds rested over it, and seemed about to wrap it within their dark folds. Our progress was necessarily slow, having to drag our companion along at every step. To have left him in his hopeless condition, was not in English or Swiss hearts. It was still half a league to the Hospice, and the night was upon us. Not a word was spoken, but we persevered. The path for some time had been between two lofty ridges of rock, which, in some degree, screened it from the storm ; but we now entered on an open exposed tract of the mountain, where there was nothing to interrupt the violence of the tempest, which now burst upon us with appalling fury. The wind, as if hitherto disappointed of its prey, swept with resistless impetuosity across the barren waste, whirling the snow round and round, and dashing it against us with such force as to produce considerable pain. It was impossible to distinguish any object, even at the shortest distance, the immense quantity of falling particles totally obscuring vision ; the breath, too, was now drawn with increased difficulty, and to advance was like facing a cataract. The mules uttered a plaintive cry, and shrank cowering before the blast. We sheltered ourselves in the best way we could behind them, and waited until the extreme violence of the storm should be past ; in a

few minutes the power of the hurricane seemed partly exhausted, but the snow fell fast as ever.

Stierry was by my side: "We must move from this place at all risks," he said, "or our bed will be a cold one, and our sleep long." "Which way lies the road?" I inquired. "I must endeavour," he replied, "to discover it; it is marked by wood posts, put down at intervals; and if I can find one of these we may perhaps reach better quarters." He spoke with a calm decision and presence of mind, that were well calculated to inspire hope and confidence. "Hold fast the end of this cord," he continued, "when I call to you to follow it, join me." Then, attaching the other end to his own arm, he went to such a distance as the length of the line (which was considerable) would allow, and described a circuit. By these means the cord was brought in contact with the desired object. We soon heard the signal, and with the assistance of our clue we readily gained the spot where he stood, which was marked by one of the guide-posts before mentioned. He now advanced, as before, to the next post, and we followed, when the word was given, in like manner. We pressed on for some time, alternately halting and proceeding on our way, as our intrepid conductor ascertained the safety of the ground; and we had begun to entertain great hopes of extricating ourselves; but these hopes were soon doomed to be crushed. After waiting a much longer time than usual without receiving the signal, I became alarmed. Stierry returned, and said he had sought in vain for the next mark to direct our path, and "to proceed," he continued, "without knowing it, were but to court our fate." "Would it not be practicable," I asked, "to return and take shelter in the chalet we passed?" "No," he replied, "I might be enabled to retrace my steps, but for *you* it would be impossible." "Then go," I exclaimed, "why sacrifice more lives than are required?" "Because," he replied, "I would rather die than desert my trust. It shall never be said that Henry Stierry forsook, in the hour of peril and adversity, those he was bound to assist, and would have followed through sunshine and prosperity. If I cannot change your lot, I can at least share it. Nothing now remains but for us to draw close together, and endeavour to keep out this intense cold." I could not but admire, and be deeply affected with, his attachment and fidelity, and saw it was vain to urge him farther.

Whilst he spoke, I felt the blood which had been warmed by the exertion and interest of our perilous circumstances, flow back with icy chillness to the heart; and a full consciousness of our utterly hopeless condition, for the first time, came upon me. We obeyed

the last injunction of our guide, and all crept close to each other, when, after addressing a joint and fervent supplication to Heaven, we awaited in silence our doom, which now seemed inevitable. I soon began to experience a return of those sensations of numbness which had been for a time overcome, together with an indescribable giddiness and exhaustion, which promised speedily to render me incapable of receiving external impressions. I had been in this state for some time, and was fast sinking into insensibility, when a strange sound struck upon my ear. At first it was blended with all the confused feelings of a bewildered fancy, but it came again and again, distinct and certain. I raised myself, and laid my hand on Stierry's arm, but he did not move. I called to him; he started, and inquired what I needed. "Listen," I replied. "What sound is that? I have heard it more than once: now, now it comes again; it is like the distant bark of a dog." He laid his ear down to the snow for an instant, then, springing to his feet, he exclaimed, "It is! it is! we may yet be saved! That sound is the signal of relief; some of the brave souls from the monastery are out to-night on their errand of mercy. God grant they may turn this way!" We could now plainly distinguish the deep baying of a dog, and imagined we could occasionally discover human voices swelling on the breeze: then again all was still, perfectly still: hope died within us, and the heart became sick. It might be nothing but the wind wailing through the rugged ravines, or the mountain spirits revelling with demoniac glee in the desolation of the storm. Again the sounds were borne upon the gale; they approached, and again died away: to have aid so near, and yet with the possibility that it might never reach us, rivalled even the tortures of Tantalus. Could we but make our situation known, deliverance was at hand. We shouted with all the vehemence of mingled hope and despair, but our voices went faintly over the expanded waste. That instinctive and mysterious love of life which is implanted in every breast, and which is only extinguished by the utter annihilation of being, now rekindled the almost expiring spark of vitality in our companions. They joined their voices to ours, and we continued our efforts. In a short time, we had the inexpressible delight of knowing that our deliverers were advancing rapidly to the rescue; the gleam of torches was now discovered through the darkness, and soon after the noble mastiff,* who first apprized us of the coming succour, had

* In the museum at Berne there is preserved the skeleton of one of these sagacious animals, who for many years was well known on the Great St. Ber-

by his unerring sagacity discovered our resting-place. He exhibited every symptom of satisfaction, by leaping about us, and rubbing himself against different parts of our bodies, in order to impart a portion of warmth to the frozen limbs; while, ever and anon, he uttered two or three short barks, to inform those who were approaching that he had found something which required their immediate attendance. Twelve or fourteen persons now appeared, some carrying flambeaux, others provided with long poles and ropes. The help came most opportunely, as by this time the whole of our party were incapable of moving. We were quickly conveyed to the Hospice, and soon safely deposited within its sheltering walls. Here, all the usual remedies were employed to restore circulation, and with complete success; cordials were administered in due time; and with the luxury of a good fire, warm clothing, and refreshing food, the perils we had gone through were almost forgotten, and we retired to rest, fervently thanking the wise Director of all events for our preservation, and the monks of St. Bernard as the instruments with which it had been accomplished.

During the next and several succeeding days, the weather was so tempestuous that it was not deemed advisable for me to continue my journey. I therefore gladly accepted the kind invitation of the fathers to rest under their roof until a favourable change in the elements should permit me to proceed in safety. In this time I had an opportunity of learning much of the domestic economy of their establishment, remarking minutely the habits and manners of its inmates. The individuals composing this community are a simple-hearted, unsophisticated set of men. Separated from the rest of the world, both by the nature of their vocation, and their peculiar locality, they are untainted by the prejudices, vices, and foibles of busy life. They neither make nor meddle in the affairs and events which disturb general society. They know but little of the ambition and intrigue by which states and empires are governed, or of the speculations and controversies which agitate scientific inquiry. There are, indeed, exceptions to this rule in men who (disappointed and disgusted at finding noxious weeds springing up at every step in what they had visionarily pictured the bright flower-garden of life) have, after gathering some of the bloom from the passing hours, and perhaps finding it mingled with the bitter poison of blighted hope, turned from the delusive mirage, and devoted the remainder

nard, and is said to have been the direct means of saving fifteen human beings from the death that awaited them.

of their days to the solitude of a cloister. Amongst this number, I judged Father Stephano to have been. He was a man about thirty-five years of age, although the lines of suffering and sorrow were so visibly impressed upon his countenance that he appeared much older. His customary bearing was reserved and melancholy; but at times the momentary gleam which spread over his dark features, and the restless glances which flashed from his expressive eyes, told the workings of a proud and sanguine spirit not altogether subdued to endure the present, or steered to the memory of the past. I had a strong desire to become better acquainted with this person, as he had been particularly active in our rescue, and seemed to possess a superior mind to his companions. At first, he withdrew from every advance to confidence: he even shunned the politeness of common intercourse; but, in time, he yielded so far as to converse freely on indifferent subjects, and asked numerous questions relating to passing events and general opinions.

His remarks exhibited a depth of understanding, and an intimate acquaintance with the world, which could only have been acquired by mixing with society and studying carefully the motives and passions which actuate mankind. He possessed liberal principles and noble sentiments and a generous heart, but all his views were clouded and discoloured with a morbid sensibility, an over-wrought estimation of what things should be, which made him look upon present realities with a jaundiced eye. It seemed as if his early dream of happiness had fled, that the stream which fed his young aspirations, and in whose crystal bosom he had seen reflected the bright prospect of a golden future, was changed to a dark and turbid current, which had swept away all his fairy palaces and elysian groves, and had left him nothing to contemplate on the dreary ocean of existence, but the remembrance of false anticipations and withered hopes.

The weather continued so inclement that I was obliged to remain several weeks at the Hospice; and, before my departure, I gained so far on the confidence of Father Stephano as to induce him to relate to me many interesting particulars regarding events which had taken place on the St. Bernard, since his sojourn amongst the brotherhood. One adventure of which he was an eye-witness, and which was attended with the most singular and romantic circumstances, I shall now endeavour to describe as near as possible in his own words. Having one day, after our principal meal, replenished the blazing hearth with some dry wood, and drawn our seats

within the influence of its reviving warmth, the monk commenced as follows :—

“ Nearly four years have now elapsed,” he began, “ since the circumstances I am about to relate took place ; yet the occurrences of yesterday are not more distinctly impressed on my memory than are the most minute incidents which then happened.

“ The season had been unusually open, and many persons had crossed the mountain with ease, at a considerably later period than the present. It was at the close of an evening, when some travellers arrived at the Hospice, and sought shelter for the night. They had ascended from Martigny, and seemed much fatigued with the journey ; the party consisted of an English gentleman, his daughter, and their domestics. Every accommodation that our roof could afford was speedily furnished them, and they were soon able to partake of some refreshment in the saloon. During the repast, more visitors arrived who had come up from the side of Piedmont ; these comprised an Italian nobleman, with his lady and their retainers. On being brought into the saloon, the count glanced round the apartment ; and, perceiving the strangers, he turned haughtily away and enquired whether he could not have private accommodation ; but the countess drew towards the fire, (near which the previous guests were seated), and made some general remarks. She was about to place herself at the board, when she was arrested by the intense gaze of the younger English traveller, which was fixed full upon her. They were both silent, when a sudden exclamation—Pauline ! Mary ! now burst simultaneously from either of them, and the next moment they were folded in each other’s embrace. This extraordinary scene was quickly explained. When girls, they had been at the same school together at Geneva, and had there formed a romantic, but sincere friendship. Events hereafter to be mentioned had divided them for some years. They had never even communicated by letter, and knew not of the changes that each had experienced. It may be, therefore, imagined what inexpressible delight this unexpected meeting had afforded them. When the first emotions of surprise were past, the young countess presented her husband to her English friends. He made the acknowledgements of courtsey with cold civility, which could not pass unobserved ; it caused the indignant blood of wounded pride to mantle on the cheek of the countess, whilst it only called a smile of conscious superiority and good natured pity, to curl the lip of the Englishman, who returned the greeting of the Italian in a manner more polite, but not the less distant.

"The two female companions had much to converse about, many questions to ask, and many strange adventures to hear ; but, as they were both tired with the exertion of the day, and needed rest and sleep, the count consented, though reluctantly, to stay the next day at the monastery, in order to afford them the gratification of each other's society. The following morning, clouds enveloped the mountain, the air was piercingly cold, the wind howled dismally, the spirit of the storm was let loose, and stalked from crag to crag with devastating strides. The winter had now commenced in its deepest intensity ; and, like the cold heartlessness of the world which freezes every stream of generous impulse and chills every bud of promised happiness, it quickly changed the face of all that was fair and bright, to one blank desert. But, unlike that winter of the soul, it shall again yield to genial spring, and flowers shall bloom and rills meander, where now the eye finds nothing but lifeless sterility to rest upon ; while for the blighted heart, and the seared affections there is no green spot ; no power to liberate the once frozen currents of youthful hopes and early visions. The monk paused, and seemed struggling with some painful emotion which, in a few seconds, by a strong effort he mastered. The weather remained so tempestuous and severe, he resumed, that those only who were well acquainted with the various paths and turnings of this wilderness, and had been long inured to its hardships dared venture abroad. The travellers were all detained in the Hospice, and it was many days before they were enabled to proceed on their journey.

"It will be necessary to refer to many circumstances that happened previously to the period of which I speak, to enable you to understand the subsequent events. Colonel Hamilton was an English gentleman of good family, but small fortune. At the commencement of his career, he followed the profession of arms from a pure love of glory, and a chivalrous spirit of enterprise. He was enthusiastic and impetuous, holding all danger at defiance, when only his own personal hazard was involved, but ever prudent and considerate where the lives or safety of others might be at stake. He rose to fame and distinction ; rank and honour waited upon him ; his name stood foremost in deeds of valorous exploits. The world was all bright before him ; but this was not to last. He was soon to receive a blow from an unseen hand that would dim all his fair prospects, and dash the cup of sweets from his lips—a blow, that would at once make shipwreck of all his fondly cherished anticipations, and leave him a prey to vain sorrows and unavailing regrets.

"In the very zenith of success, his wife—she who had accompanied him through all his fortunes—the being who could alone temper the ebullitions of his too exuberant feelings, or pour the balm of consolation into his wounded spirit—the companion who had shared all his toils and griefs, who participated in all his hopes and fears—the creature on earth he loved more dearly than all that wealth and power, or fame could give, was snatched from him by the relentless hand of death. After this bereavement, he no longer took any part in public affairs, he disposed of his commission, left his native land, with all the scenes of his early youth, and settled in Switzerland, on the banks of the Lake of Geneva, where he resided for many years with his only child, the young and beautiful Mary. All his care was directed to her education. All his happiness was centred in her welfare. She was the last link that bound him to the world, the green leaf that distilled vitality into his withered heart. He loved to look upon her; he loved to trace the development of her character through each succeeding year; and he was richly repaid for all he had bestowed. Her gentle assiduity, her ceaseless solicitude for his comfort, her more than filial obedience, came soothingly to his broken spirit. Her high sentiments of virtue, and pure principles of religion, might have shamed many a sage, and taught even her father to forget his woes and to kiss the rod that chastened him. Time and his daughter's love had in a great measure softened the poignancy of his grief; and, though happiness, as he had once known it, was dimmed for ever, yet he felt that there were many bright things in store for him. If a fleeting cloud occasionally crossed his brow, it was but as the passing ripple on the bosom of the lake when some slight breeze skims its surface, but is incapable of agitating the calmed depths of its serenity. His transitory gloom was always quickly dispelled by the silver-toned voice of Mary who, at these times would sing to him some of the plaintive airs of their native country, or swell the rich melody of the Swiss mountain lay. He would often gaze upon her sylph-like form and the perfect symmetry of her graceful figure; upon her beautiful and fascinating blue eyes, which told of nought but innocence and joy; and on her expressive countenance forming the faithful index of a spotless mind; and, as he gazed, his heart would overflow with intense affection. He would then clasp her to his breast, and call her his guardian spirit, his only joy, and pour upon her that choicest of all earthly gifts, a father's holy benediction. Such was Mary, ere sorrow and suffering were more to her than mere words. She was yet

to taste the bitter draught of misery, she was yet to know the pangs of anguish. Even this guileless, gentle being, was not beyond the reach of the fell demon, who hovers over the destinies of man, ever ready to cast his envenomed dart, to strike where the least expected, and to leave the rankling poison in the wound, to blacken and destroy.

"The spot Colonel Hamilton had chosen for his residence was situated near the small and beautiful domain of M. de Rosenberg, a Swiss patriot, who had lost much of his property in the disturbances incident to the French Revolution; but he still possessed this patrimonial estate, on which he resided, if not in affluence, at least in contentment. Between him and the English colonel a close intimacy grew up. Neither of them were disposed to enter into general society, but they found in each other's company a similarity of taste and habits, which rendered their intercourse mutually agreeable. M. de Rosenberg had a son a few years older than Mary; as children they were inseparable, both in their hours of play and their times of study. He was always her little protector, and she looked to him as her friend and brother. In the course of time, he went to one of the German universities to finish his education; on his return after several years, he found Mary changed from the pretty engaging child he had left, to a beautiful fascinating girl, just budding into womanhood. They were now, as before, constant companions. Often would they wander amid the mazes of copse and vineyard which adorn the banks of the lake. Often, on a soft summer's evening, would they gaze across the expansive waters, and watch the small boats with their white sails gliding silently and tranquilly across its glassy bosom. At other times, they would climb the surrounding hills, rising as an amphitheatre; and, from some lofty terrace, gaze on the more magnificent features of nature, as displayed in the distant Alps, with their snow-clad peaks, and in the towering summit of Mont Blanc, soaring high above the rest in its lone majesty. All their pursuits, all their thoughts, bore the same impress and tended to the same end. They had but one object—but one heart. No wonder, then, that he loved, and that she returned his affection with as deep and as fervent a passion as ever glowed in the breast of woman. They knew no deceit. Nor did they attempt to conceal their attachment. Their love was approved. Their fathers beheld with delight the increasing fondness of their children, and looked on their union as the accomplishment of each one's happiness. Time rolled on, and the period was fast

approaching when Arthur was to plight his vows to Mary in the face of Heaven, and before the eyes of men ; to give his pledge to love and cherish her as his own soul.

" M. de Rosenberg possessed a small estate in one of the distant cantons, from which a considerable sum of money was due ; and, as Arthur had never been in that district, his father sent him to the town of —, near which the property was situated, to make the necessary inquiries. Before setting out on his journey, which would occupy him some days, the youth went to take leave of his beloved. They spoke much of their long and often-told love ; of their approaching marriage, and the years of joy that awaited them. When they parted, he pressed her fondly to his bosom, and imprinted one pure kiss on those lips whose breath was more precious to him than the scented breeze from spicy groves.

" A week passed, and Arthur did not return. His friends became anxious ; day succeeded day, and yet no tidings arrived, and Mary began to feel that sickness of the heart which ever accompanies hope too long deferred. At length, a letter came ; but its contents poured no oil on the troubled waters. It came from the young de Rosenberg, stating that he was in the most imminent peril of his life, and entreating his father to lose not a moment in coming to his assistance. M. de Rosenberg immediately set out to the place from which his son's letter had been dated. Colonel Hamilton insisted on accompanying him ; and they made all speed. In about three days they arrived at the town of —, and found Arthur lying in the dungeon of a prison under a charge of murder. The circumstances that led to this untoward event were briefly these. An Italian priest had been found assassinated in one of the little-frequented mountain paths. The brother of this priest stated that, on the day when the murder was perpetrated, he had been pursuing his customary sport of shooting the goat and chamois, and was returning home by one of those perilous tracks which are only known to the adventurous hunter, when, at one of the most dreary and sequestered spots, he discovered the prisoner endeavouring to drag the body of a man from the way-side, for the purpose of casting it over some precipice. He approached cautiously, and succeeded in seizing the criminal before he had time to make resistance. Occurrences were all strongly against the young Arthur. He had been seen to leave the town of — in company with the murdered priest, but a few hours before the deed was committed. A pistol was found in his possession, that had been recently discharged, and

THE MONK

marks of blood appeared on various parts of his clothes. His accuser called loudly for justice to be done to the slayer of his brother, and every one was ready to condemn.

"The meeting of a parent and child under such painful circumstances, may be better imagined than described. M. de Rosenberg clasped Arthur in one long, fond embrace. He knew—he felt that his son could not be guilty; but how was his innocence to be proved? In vain did the agonized parent try to suggest various ways of repelling the accusation. All his plans were abandoned as soon as they were formed; each one was found delusive and impracticable. They were like the bubbles of hope rising through the troubled waters of affliction, and instantly broken as they became exposed to the atmosphere of truth. The simple facts of the case, as they have been related, he saw must condemn him: He beheld the prop of his declining years, the child to whom his heart yearned with the fondest affection, the being who was united to him in body and soul by the mystic tie of consanguinity—he saw this beloved one doomed to death and ignominy. He felt that his own name would be blasted, his reputation stigmatized, his house dishonoured, his happiness for ever gone. He was regardless of the soothing consolations that sympathy and friendship can give; and even, for a time, religion was incapable of imparting comfort to him. He would gaze upon the unfortunate Arthur till the big tears rolled in rapid succession down his furrowed cheeks, and with one convulsive sob he would cast himself on his son's neck, and call passionately upon Heaven to witness for his purity.

"It is not in human nature at once to confess that whatever is, is right. When sorrow and misfortune lower, the mind will at first rebel. The wise sage and the enlightened philosopher, the pure moralist and the genuine enthusiastic believer in divine interposition, have all occasionally repined, and questioned the justice of the decree that fated them to pain and misery. And so it must ever be with the finite intellect of man. The effects produced by the mighty power that orders and directs the universe may be seen; but the first causes which created those effects, and the ultimate ends to be attained by them, are beyond the comprehension of mortality. We find a small seed placed in the earth puts forth a young shoot, which quickly matures into a magnificent tree; but we know not how the vital principle is contained in the seed, or by what power the tree is enabled to perfect its renewing fruits. But to return to my story. During the few days that elapsed previously to the

trial, Colonel Hamilton used every means to procure all the information that might tend to favour his young friend's cause, and invalidate the testimony of his principal accuser. Both the priest and his brother were strangers in the town of —, no one knew from whence they came, or had even seen them before.

"At length the dreaded morning arrived, and the justice-hall was crowded with persons anxious to witness the trial. Arthur walked through the chamber with a firm step, and took his place at the bar with a calm and almost proud look. His youth and the natural ingenuousness of his countenance and manner, together with the deep anguish marked on the brow of his father as he stood near to him, and listened with painful intensity to each word that passed, would have excited compassion in every breast, and produced a feeling of pity and commiseration in every heart. But the crime of murder, with which the prisoner was charged, was almost unprecedented in that peaceful valley, and its author was viewed with the utmost abhorrence and detestation; so that every kindlier feeling and sentiment were forgotten. All the particulars of the case were now examined, and every circumstance tended to corroborate the charge of murder, with which he stood accused. When called upon for his defence, he made the following statement. It was true, he said, that he had left the town of — on the day in question in company with the priest, and had journeyed with him for some distance; when at length they reached a wild and lonely spot in the road, his companion suddenly turned upon him, and, grasping his arm, presented a pistol to his head and demanded his money: at first he thought of resisting, but this he soon found to be impossible; he therefore tried to remonstrate, and said he had no money with him; the priest pointed to a valuable ring which Arthur wore on his finger; this he took off and gave up, in hopes it might satisfy; but the other swore, with a savage imprecation, that he would have something more, and was about to commence rifling his person, when, watching an opportunity, Arthur shook off the robber's hold, and closed with him. The struggle was brief; for the pistol, by some mischance, went off, and the contents lodged in the side of the ruffian, who instantly fell. As soon as Arthur had in some degree recovered the first surprise, he began to examine the state of his antagonist. Life was not totally extinct, but he had no means at hand of reviving the vital spark, or even of staunching the blood; he therefore carried the insensible man a short distance from the path, in order to place him under the shelter of a rock, intending as speedily as possible to procure some further assistance. Whilst oc-

cupied thus, he was seen and seized in the manner before mentioned. After stating these particulars, he concluded by making the most solemn asseverations of his innocence, and appealing to the humane pity and justice of his judges to acquit him. He spoke with all the force and energy of truth, and his words produced a conviction that he was not guilty in the minds of most of those present who had come there predisposed against him. His judges were much embarrassed. They conferred together for some time, and again interrogated his accuser. In reply to their questions, he stated that, after delivering the prisoner up to the authorities, he returned, accompanied by two or three of the police, to a cottage on the mountain, where the wounded man had been carried by some of the peasants. They found him quite dead; every part of his dress was carefully searched, and no ring could be found. The story, however ingeniously devised and plausibly put forth, he believed to be a contemptible fabrication. Not one single proof could be adduced of any thing that was advanced, it must all be taken on the bare word of the criminal, who, of course, did not hesitate to forge a lie for the purpose of extricating himself from the penalty of a murder. The accuser, therefore, called vehemently on the court to condemn the culprit. Though Arthur's defence had produced a considerable sensation in his favour, yet, from its entirely circumstantial nature, it could not at all alter the law, which preferred the evidence of the accuser to to the assertion of the accused. He was consequently found guilty, and his life declared forfeited.

"When the sentence was pronounced, M. de Rosenberg uttered a cry of anguish that pierced every heart; and before any one could come to his aid he fell insensible on the floor of the hall. Arthur had heard his doom with calmness, but when he saw his father he could refrain no longer. Casting himself on his knees by the side of the wretched old man, he pressed his lips on his cold, clammy brow; he clasped the now unconscious hand with the deepest fervour; and gazing upon him with a look of passionate tenderness, which soon changed to one of unutterable woe, he wept long and bitterly. No one attempted to part them. Their grief was too sacred to be broken in upon, even by a word. All sincerely sympathized in the scene. At length, M. de Rosenberg began to recover, and was carried out, while his son was re-conducted to his lonely cell.

"The most powerful interest was used in Arthur's behalf; and this, united to his youth and the respectability of his connexions, together with a degree of uncertainty that existed in the peculiar

nature of the case, all combined to procure a commutation of the sentence of death into a decree of perpetual banishment.

"His father and Colonel Hamilton saw him depart from the town of —— an outcast and wanderer, whilst they returned to their once peaceful homes miserable and heart-broken. One more painful task was still to be performed—it was to tell Mary of her lover's fate. Her father broke the fatal intelligence in the gentlest manner possible. She heard him patiently and in silence. Her mind had foreboded evil, and it now came before her in fearful reality. When he had concluded she shed no tears, nor exhibited any violent emotion; but her eyes were fixed on vacancy with a wild, agonized intensity. The spring of her life-blood seemed in an instant frozen at her heart, as her fond father pressed her to his aching breast. She was helpless; almost lifeless. The blow had crushed her to the earth. The iron had entered into her soul. All her dearest and most cherished anticipations were blasted. The bud of promising happiness was blighted and withered, at the moment it seemed ready to burst into full blossom. She would have shared her lover's exile, and braved hardship and deprivation with him. She would have borne shame and infamy. She would have endured the scorn and pity of the world. She would have sacrificed home, and every domestic peace, to have lightened his load of sorrow, and soothed his ill-starred lot; for she never doubted his innocence for an instant. But her father! she could not forsake him; she could not leave him in his old age to mourn alone, to die unwept. She loved her parent with a genuine enthusiasm, and resolved to make filial duty the strongest motive to action. Hers was not a spirit to be altogether subdued by adversity. It was crushed and bruised, but still it rose from its first state of overwhelmed wretchedness. She felt that life could have in it nothing bright for her; yet she did not yield to despair, but endeavoured to beguile her own griefs by the most watchful affection to her father. He, like Mary, felt perfectly assured that his young friend was not guilty. But Arthur was under the ban of the law—a convicted felon—a branded assassin: to unite his child's fate with such an outcast was impossible. He could, therefore, only trust that time might dispel some of the clouds that rested so heavily on the prospects of the future. He could only hope that Heaven would, in its good time, clear away the darkness that now oppressed his house.

"It was soon manifest that the conflict was too severe for Mary's physical powers. The secret melancholy that preyed upon her heart opened a sure way for the approach of insidious disease. The warm

glow of health passed from her cheeks, and the sparkling glance no longer darted from her eyes : that elasticity of step with which she used to walk so gaily along, with Arthur by her side, was gone. Her smile was of sadness, and the suppressed sigh would often escape unconsciously, betraying how painful was the struggle in her bosom. Oh ! 'tis a sad and fearful thing to watch the fading flower—to see it, in life's first spring, droop day by day—to see its vivid colours disappear, and all that once was fair and pure and beautiful to look upon, become a sickly and withered plant. What dew can again revive the sapless heart ? What breeze can again refresh the blighted affections ? Colonel Hamilton saw all this in his child ; it inflicted a deeper pang than any he had yet experienced. Change of air and scene were recommended ; and he decided to pass into Italy, and spend the winter in a softer climate. It was for this purpose that he set out, rather late in the season, from Geneva. Mary having expressed a wish to cross the St. Bernard, he took that pass. They arrived at the Hospice, and were detained by the causes before stated."

The monk here paused, as the evening was far advanced ; and the next day he continued his story. "I must now," he said, "give a short history of the early life of the Countess de Vegnet, who, as mentioned already, arrived here on the same night with the English travellers, and so unexpectedly encountered her early friend Mary Hamilton. The countess was of Spanish birth, and the proud blood that throbbed in her veins claimed descent from a long line of ancestry. Her person was tall and commanding : dignity and love were in her every gesture. Her character was marked by strong passions, and her sentiments and ideas were of that vivid, almost morbid, kind, which too frequently entail misery and disappointment on their possessor. She formed a sincere attachment to Mary when they were together, though the two were very dissimilar in tastes and pursuits. Paulina had none of the exuberant spirits and warm enthusiasm of her light-hearted friend ; but the springs of her feeling were perhaps deeper, and certainly stronger, from not finding a fit channel in which to flow. Whilst Mary had a smile, or a tear, ever ready to sympathize with each one's joys or sorrows, the emotions of Paulina were rarely developed, but by the tale of some wild or romantic distress. After leaving Geneva, she went to reside in one of those beautiful valleys that branch from the Black Forest, and down which the winding and impetuous Meurg takes its course. On its wild banks, and amid the surrounding picturesque scenery, several of her succeeding years were passed. And whilst

the mind gained strength and knowledge, her person was matured into perfect symmetry. During this time, her hand had been often sought by the wealthy and noble, but she had refused all her suitors with indifference or contempt; and it seemed that the heart of the proud beauty was not to be won.

"Rudolph Willenheim was the son of a neighbouring gentleman, who had but little rank or fortune to boast of. His lineage was pure and noble, and the domains of his sires had, in times gone by, furnished their swelling train of vassals and dependents. But circumstances had deprived succeeding generations of a portion of their honours and their lands, and the present Baron Willenheim resided in comparative poverty and retirement. It was about the time Paulina had entered her twentieth year that Rudolf returned from the university, and took his place in the home of his father. From a child, he had exhibited strong indications of an impetuous and sensitive temperament. During his education, the visionary notions he had early imbibed were fostered rather than checked. He devoured with avidity all the imaginative works of romance, with which the German school of literature abounds. He fed upon them; they formed part of his existence. He delighted to dwell on their wild speculations, and to plunge deep into the abstruse mazes of conjecture and mystery. Though he had lived in the busy world, and had associated with men, he knew little of their passions or habits, their vacillations and their malevolence. His world was in his own breast. There, everything was clothed with sunshine; every object was surrounded by a bright halo, that shed upon it one peculiar colour. The lens through which he contemplated the future was a deceptive one; it showed him things as he wished them to be, not as they really are. For some time after his return to his native valley, he loved alone to climb the rocky steepes of the neighbouring mountains, and to gaze over their wide and magnificent prospects; or to watch the sparkling waterfall, as it leaped from crag to crag down the rugged dell. He loved to wander by the rippling stream, and mark its limpid waters flow murmuring on. He loved to recline beneath the shade of some oak or dark embowering pine, to tell the parting day, and then to hold communion in thought with strange creatures not of earth—elves and fairies. It was on these occasions that he could indulge, undisturbed, the wandering visions of his fevered imagination. From the chimeras of his heated fancy, he could people the silent solitudes with ideal beings, and make every tree and shrub instinct with life. He could create himself their king, and summon with a beck the presiding genii of

the mountains, and the guardian spirits of the sylvan groves, to realise his commands. In the green turf, which rose sloping from the crystal fountain, enamelled with flowerets of every hue, he beheld his throne. In the vast vault of heaven, spangled with the countless host of blazing stars, he saw his canopy. The pearly dew, as they lay glittering in the silver moonbeams, were his treasures; and in the whispering boughs, as they waved in the night breeze, he heard the music of a thousand sylphs. In such reveries would he often pass away the swift fleeting hours, until midnight surprised him in his lonely imaginations. He saw Paulina. She instantly became the queen of his fabled goddesses, and the reality of his most ideal picturings. A new field was opened to him. Her image was now associated with every scene. She was the ruling power that swayed his destiny. But his day dreams were ere long to be broken, and the magic wand of phantasy to give place to the unwelcome rod of truth. He met her again, and again. She was his soul's idol, and he believed that she returned his love. Yes! he believed that she felt the same deep intense affection that glowed in his heart.

"As may be supposed, Rudolf's temperament was not one to brook long delay. His love was not like the soft zephyr that sighs gently along, stealing with a kiss the sweets from the blushing flower. It was rather the fierce whirlwind, that bears down every obstacle, and concentrates every feeling in one overwhelming vortex. He told her of his passion. He poured out his whole soul. He spoke in words of fire. She turned from him with scorn. She replied to him with disdain. Each syllable fell like scorching metal on his excited brain, and stung him to madness. He left her. He fled from the scenes no longer dear to him. He became a hopeless fugitive. In a few months, tidings reached his friends that he had died in a distant land. Many mourned his hapless fate, and even Paulina shed bitter, though unavailing tears.

"Years rolled on, and Rudolph ceased to be remembered. When men mix, and are occupied in the ever-changing events of life, the interest of the present soon obliterates the impressions of the past. They behold the green mantle of spring cast over the face of nature; they hear the melody of birds, and the glad song of the husbandman returning from his labours; they forget the cheerlessness of winter, and lifeless silence of the fields and groves; they enjoy the blessings of peace and the delights of friendship and love; and they no longer remember the miseries of war, the sword of the destroyer, and the desolation of bereavement. It is only in barren solitude,

where the quiet tenor of man's life is unbroken, and where creation herself refuses to smile in the garish sunbeam, that the chilling winter of the soul, the never-brightening hopelessness of the spirit, can be felt. It is there that the lone heart can dwell on the remembrance of joys for ever gone, and cherish sorrows never to be effaced.

"The home of Paulina was situated near a celebrated German watering-place, much frequented by the idle and curious, as well as the genuine admirers of natural scenery in all its diversities of sublimity and beauty. The ennuéed voluptuary who seeks change merely to relieve his satiety—the follower of pleasure in its most alluring forms—the votary of gay revelry and thoughtless dissipation—the slave of the burning excitement of the hazard-table, with its seductive concomitants—all these resorted to B——, and there found opportunities of gratifying their several pursuits. One season, among the visitors was the Count de Vegnet, an Italian nobleman of high rank and reputed wealth. He did not enter into the lighter amusements of the place, but he played constantly and deeply. This man became acquainted with Paulina, and professed to entertain for her the most violent passion. She had lately inherited a considerable property and might be considered an heiress. This circumstance probably, in a great measure influenced his conduct, and determined his choice; for a mind, vitiated and sensualized, like his, could not feel that pure and holy sentiment which sanctifies the altar of love. His offering could only be made to the temple of passion, or on the shrine of avarice. Before leaving B——, he made honourable proposals of marriage to Paulina. Her first impulse was to reject him, but the wishes and commands of her parents, added to the apparent splendour of the alliance, at length prevailed over her scruples. She consented to become his wife.

"After their marriage the count and his lovely countess returned to the vicinity of Naples, where his estates were situated; and, for sometime, Paulina was absorbed in a gay series of pleasures and enjoyments. Every thing seemed bright. But alas! she soon learned that pomp and pageant, of themselves, are insufficient to secure happiness. She soon found, that in the dazzling halls and amid the blaze of princely magnificence, pangs of lonely wretchedness might be felt—that beneath the jewelled tiara and the spangled zone, a burning brain might throb, and a bleeding heart might pulsate. De Vegnet had hitherto appeared under false colours. He had disguised his real sentiments and opinions in order to accomplish an end. Having done this, and having obtained the pos-

session of his wife's fortune, which had become absolutely necessary to enable him to continue in his habits of lavish extravagance, his true character began to develope itself. He was mean, selfish and morose, without one spark of generosity in his soul, without one noble feeling in his breast. He was implacable in his hatred; hollow and insincere in his friendships. He was the victim of furious and vindictive passions, which often involved him in private quarrels not unfrequently ending in scenes of violence and blood. He was alike feared and despised by all who knew him. With this man Paulina found, but too late, that she had intrusted her happiness. At first he shewed her the greatest consideration, and was all kindness and smiles; for his object was to deceive her, as regarded his real character, until he had induced her, under various pretences, to place the whole of her property in his hands. This was all he desired, and he had now no motive for acting with duplicity. The mask was, therefore, thrown off. By degrees, he neglected his wife. His behaviour became cold and heartless; and, at last, he treated her with cruelty and scorn. His house was the resort of the profligate and abandoned. He was false to his promises, and a traitor to his marriage vow. For sometime, the proud spirit of Paulina refused to complain; and, when at length she did remonstrate, the only answer she met with was insult and derision. It stung her almost to madness; whilst he, the black-hearted villain, saw her, whom he had taken from innocence and joy, plunged deep in the pit of misery and despair. Yet the fiend knew no compunction; the demon felt no pity, no remorse. He wished his victim dead, in order that nothing might cross the broad path of vice he had determined to pursue.

"Having occasion to take a journey to Paris, the count determined that his wife should accompany him, although from delicate health, she was little able to bear the fatigue. He took the road over the Great St. Bernard; it was on this occasion, that he and his retinue were detained at the Hospice, as before mentioned.

"Thus far," continued the monk, "I have given you an account of the individuals who so strangely met here, under such peculiar circumstances—and who for some days partook together of our hospitality. I must now proceed to relate briefly the incidents that occurred during their stay, and describe the scenes of which I became a witness. At this time, there was in the monastery a monk who had joined the fraternity about two years before. He had ever kept aloof from all strangers, and as much as possible from the brethren. He appeared

only at the customary devotions, or when it was his turn to attend upon the sick. But he loved to dare the perils of the mountain path when the elements were warring in fearful fury. The chilling blast, the howling tempest, the sweeping storm, and the devastating avalanche, were more congenial to his spirit, than the quiet monotony of a cloistered life. In consequence of this, he was ever ready upon any expedition of hazard or danger, and he always accompanied the servants of the Hospice, when employed in succouring the benighted travellers, or in rescuing them from the snows.

"One night, soon after the arrival of Colonel Hamilton and the count, a party was sent out to traverse the mountain, in order to give assistance to any unfortunate wayfarers who might have been overtaken by the darkness. This monk as usual attended them.

"They visited most of the dangerous parts of the track, and were returning home when the sagacity of one of their dogs, discovered a person overwhelmed by the snow. Life in him was not yet quite extinct; he was quickly conveyed to the monastery and placed in the saloon where the strangers were partaking of the evening refreshment. All gathered around, and proffered their aid. His face, on being exposed, displayed a fine noble countenance on which the death agony seemed stamped. At this moment, a wild shriek burst from Mary, and she fainted in the arms of her father. At the same time, the countess uttered a fearful cry, and rushed from the apartment. All was now confusion; and, for a time, the dying man was forgotten.

"Mary soon revived; and, never shall I forget her look of concentrated anguish, the sad piercing accents in which she exclaimed, 'Oh! my God! he is dead.' The cause of this extraordinary conduct was shortly explained. The being who now lay apparently lifeless before her, was Arthur de Rosenberg. She knelt by his side. Her hands clasped in agony—her eyes raised imploringly to heaven—her beautiful countenance exhibiting the strongest emotion—and her lips moving with fervent prayer—she seemed as an angel of life sent to arrest the departing spirit, to rekindle the fast expiring spark of vitality. She parted the dark hair upon his marble forehead—she held her lips over his, but no warm breath returned her sigh—she placed her hand upon his heart, but no responsive throb vibrated to her touch. She again sank insensible by his side. For a short time, all were silent. Her father covered his face with his hands, and wept in uncontrollable anguish. Oh! it is a fearful thing to see an old man's tears. In youth, the springs of sensibility lie near the sur-

face, and may be called forth by the first stroke of sorrow, or even by the tale of suffering and distress ; but in age, when the more acute feelings have been blunted, and the genuine impulses of our nature have been checked, when the heart has been chilled by a contact with a cold world, and the softer passions have been subdued, severe indeed must be that blow, which can cause those fountains, so long dried up, to again flow with the bitter waters of affliction.

"The unconscious youth was now removed to another apartment, and the customary restoratives applied. By degrees, animation began to return, and great hopes were entertained of his recovery. In the mean time, Colonel Hamilton had regained his composure, and proceeded to give the monk before spoken of, a short history of Arthur, and of the circumstances that had obliged him to become an exile from his native land. The holy man heard him with increasing attention, and during the narrative asked many questions as to the exact time and place, when the supposed murder of the priest occurred. 'Mysterious providence' at length he exclaimed, 'how inscrutable are thy ways ! How infinitely beyond the scope of human intellect to fathom ! How far beyond the reach of human knowledge to define ! The darkness and the storm may do thy bidding, and display thy mercy equally with the bright sunbeam, or the gentle zephyr ; the cup of death and misery may contain the elixir of life and the Lethé of sorrow ; the very instruments of woe and destruction, may be converted into the means of happiness and salvation.'

"As he spoke, all gazed upon him with astonishment, and waited anxiously for some exposition of his strange words. He continued, addressing himself to Colonel Hamilton, 'at the time this unfortunate affair occurred to your young friend, I was travelling in the neighbourhood of —, collecting contributions for our order. One day, on passing a small chalet situated near an unfrequented path of the mountain, my attention was called by a cry of distress. I immediately turned to the hut ; and on entering it, discovered stretched, upon the floor, a man evidently in a dying state, with the blood flowing from a recent wound in his side. I gave him some wine, which in some measure revived him. He had on the habiliments of a friar ; but, under his dress, was a belt containing a pistol, and several stiletos. When he was able to speak, he asked if I were a priest, and would shrive him. On being required to confess a shudder passed over him ; he turned his face from me, but I entreated him, by every argument, not to plunge his soul into eternity with all its load of sin unrepented. He heard me with strong emotion, and, after some he-

situation, he replied 'I will, I will! but mine is a horrible story.' He then gave me a short sketch of his life; and from this it appeared, that he had been for some years carrying on a system of plunder and violence, sometimes leading a band of brigands and at others, under various disguises, luring unwary travellers with false appearances and watching an opportunity to rifle and destroy his victims. But he had not always been abandoned; and the memory of his early days, passed in peace and happiness, came across him in his last hour. I then asked how he came to be wounded, he replied; 'I will tell you, but first take this,' placing a ring in my hand, 'and promise me'—Before he could proceed, nature was subdued—he sank back—his eyes closed—his upraised hand fell passive—his lips parted; and, with a few confused words of prayer, his spirit fled. On my arrival at the next town, which was in an opposite direction to —, I gave information of these circumstances, and proceeded on my journey.'

"Mary, who had recovered from her fainting, and who had listened in breathless anxiety to every word that had passed, now started up; and, laying her hand upon the monk's arm, exclaimed with wild energy—'but the ring! where is it! where is it!' 'Here, lady,' he replied, and placed it in her hand. She cast one look at it—'it is!' she exclaimed, 'it is my own gift to him! his innocence will now be proved.' During the recital of the foregoing particulars, the object most materially interested in them had so far recovered as to be able to speak, and to take some refreshment; but it was not yet thought desirable to tell him of the joy that was in store for him. In the mean time, the countess had sent an urgent request to speak with one of the fathers. They were all occupied in devotion save the monk so often mentioned, and he repaired instantly to her apartment.

When he entered the chamber her face was averted, and her hands clasped over her brow. He closed the door; and, gently approaching, asked how he could serve her. She slowly turned her head and fixed upon him her full dark eyes, with a look so wild, so fraught with agony, that he started back and stood transfixed in amazement. His countenance assumed an ashy paleness. His limbs trembled. He felt that sickness of soul which no language can describe. His gaze was rivetted intently on the object before him; and, for some moments he remained incapable of speech or motion. At length, with a strong effort, the countess broke silence, and exclaimed, 'It is, then, a reality. It is he himself! Merciful Heaven! support me. Rudolf,' she continued, 'they told me you were dead, and I thought myself your murderer. I wept in bitterness of spirit, but my tears

were unavailing. I was doomed to expiate my fault. You now behold a miserable heart-broken creature, subdued by misfortune, oppressed by anguish and remorse, borne down by wretchedness and despair, but it has been of my own seeking. My own pride and folly have embittered every drop in the cup of life. Yet pity me. But how can I ask you to pity me—you whom I have so much injured—you whom I have so deeply loved? Oh! I know not what I say, yet I must speak. Yes, Rudolf, I deeply loved you! You alone had my first, my only affection; but I thought to humble you. I wished to gratify my vanity by seeing you at my feet, pleading a cause already sufficiently advocated. To show my own power, I trifled with a heart I would have died for; but I was justly punished for my duplicity. Since that day I have not known peace, and the horror of my present fate is aggravated by the remembrance that I might have been blessed and happy. And now, can you forgive, can you pity me? Speak, I implore you! I am now sinking fast into the grave, where alone I can find rest; and were I but assured of your forgiveness, I could then calmly, nay gladly, meet death.'

"Rudolf had hitherto been silent. The mingled feelings of joy, surprise, grief, admiration, and regret, had alternately agitated his mind, and he was bewildered with conflicting sensations. Every word of Paulina had reached to the inmost recesses of his soul. Every syllable had awakened the dormant, but not extinct, energies of his nature. He was in a mingled delirium of bliss and torture. But the last appeal roused him to the terrible reality. He took her hand. The touch ran through his veins. His brain burned. No longer master of himself, he caught Paulina in his arms. He clasped her to his breast, and poured forth his long-suppressed feelings in a torrent of wild and impassioned language. He recalled the time when he had first seen her in his native valley. He remembered the hours of exquisite happiness he had there spent. He forgot his present sacred office. He forgot that she was the wife of another. He forgot everything, but that his beloved lay upon his bosom, that his arms encircled her, that her warm tears fell upon his cheek, that her heart throbbed responsive to his own; and, as he strained her again and again to that heart, and impressed a fervent kiss upon her lips, there was no external world for him. He thought not of time or eternity. Heaven could not long permit such a profanation to continue unpunished. A faint shriek from Paulina recalled him from his madness. He turned and beheld the Count de Vegnet, who had entered unobserved, and thus witnessed his wife in the monk's em-

brace. At first the Italian's saturnine visage exhibited a malicious smile of triumph, which quickly changed to a demoniac scowl of hatred. With one hand he seized the unfortunate countess; with the other, he plunged a dagger in the breast of Rudolf.

"Before any alarm could be given, the count fled and escaped to France, where he was soon after assassinated in a street brawl. The countess had a long and dangerous illness, from which she ultimately recovered. Shortly afterwards she entered the sanctuary of a convent, where the comforts and consolations of religion soothed her bruised spirit, and opened to her view that bright heaven where there shall be no more death or sorrow.

"Colonel Hamilton recognised, amongst the servants of the count, the person who had appeared at —— as the principal witness at the fatal trial; and, from the confessions of this wretch, information was obtained which, when combined with the previous testimony of the monk regarding the ring, afforded complete evidence of Arthur's innocence. His friends were, in consequence, enabled to procure a reversal of the decree of his banishment, and he was speedily restored to his father, his native land, and his beloved Mary.

"In this dreary solitude, separated as it is from the rest of the world, and divided from intercourse with men and manners, the most trivial instances become subjects of interest. No wonder, then, that these strange incidents should be long remembered in the Hospice; but now they are almost forgotten; and more recent occurrences occupy the thoughts of my brother inmates. Yet on my mind the impression of these circumstances is as vivid as the scenes of yesterday. No time or change can obliterate them. I can now see the graceful form of Mary bending in silent anguish over the breathless body of her lover. I can now hear the expressions of rapturous joy that burst from her lips when she found that he lived and was innocent. I can now behold the pale melancholy and touchingly beautiful countenance of Paulina as she told her tale of woe. I now have before me the devilish malignity spread over the features of De Vegnet, as he plunged his dagger in my breast—yes! you may be surprised; but I am Rudolf! It was my heart's blood that he sought. The wound was not fatal—would it had been! I should then have escaped misery such as no words can tell. But, no! I should then have died with a curse upon my soul. Heaven is all-wise, the omnipotent disposer of life and death is all-merciful."

M.

AN ESSAY ON THE EXPEDIENCY AND MEANS OF ELEVATING THE PROFESSION OF THE EDU- CATOR IN THE ESTIMATION OF THE PUBLIC.

“Wie kommts? Ist etwa der Bildung der Menschennatur an sich selbst eine geringere Kunst, als die Tanz—die Schauspiel—die Gesang—die Reitkunst, und die Kenntniss der Modenartikel? Ist etwa wirklich die Fertigkeit des Tänzers, die Bildung des Schauspielers, die Kunst eines Sängers, die Sattelfestigkeit des Reiters, und das Wissen eines Modehändlers mehr werth, als der Umfang der Erfordernisse der Menschenbildung im Ganzen?

“So viel ist gewiss: der Mensch, das Meisterstück der Schöpfung, sollte auch das Meisterstück seiner selbst, das Meisterstück seiner Kunst seyn.

“Aber ist er's, nachdem er Jahrtausende gelebt hat, ist er's. Kann er jetzt auf seinen Lorbeeren ruhen, und es aussprechen: ich bin was ich seyn soll?" — *Wochenschrift für Menschenbildung.**

PART I.—“THE EXPEDIENCY.”

INTRODUCTORY CHAPTER.

INTELLIGENCE is the sublimest characteristic of God, for it is that which actuates all the divine attributes, pervades the universe, and reflects through creation the visible similitude of the divine wisdom.

Intelligence is the high prerogative of man, created first with all his appetences eager for a pleasurable existence, his nature had yet to receive a nobler distinction in the approachable likeness to God, who shed over him the lustrous beatitude of his own image, and man became the reflective intelligence of his maker.

Intelligence therefore is the connective affinity between God and man, and though the original excellence of the soul be lost, and her brightness obscured, into the spiritual Eden kept and cultivated to

* How! Is, then, the education of human nature in itself less important than the knowledge of dancing, of the drama, of singing, of horsemanship, and the fashionable accomplishment of the day—is then, indeed, the expertness of the dancer, the science of the actor, the art of the singer, the skill of the horseman, or the wisdom of the fashionist, of more worth than the compass of the necessary education of human nature in the whole?

So much is certain: man, the masterpiece of creation, should also be the masterpiece of himself, and the masterpiece of his art.

But is it so? After the experience of a thousand years, is he perfected? Can he now repose upon his laurels and exclaim, ‘I am what I should be?’

the highest possible perfection, the Deity may still descend and hold converse with his creature, and lead him through the observation and understanding of Nature, to the contemplation and worship of the divine holiness.* But this intelligence has another and nearer application, and herein, too, the similitude between the creature and the creator is obvious that as the attributes of the Deity are subject to intelligence, so the human virtues, which are the infinitely remote shadows of the divine, should be submissive to that "wisdom which cometh from above," that virtue should not arise from a brief and precarious impulse, but from an actuating principle in the soul—"a new command give I unto you, that ye love one another." But how shall this law be fulfilled, when the image of God languishes fainter and fainter in the soul? for comparatively with his ignorance man degenerates, and in his debasement secedes farther and farther from the divine similitude. The translation of exalted intelligences into the "sanctities of heaven" is the declared object of mortal probation. Created with an inquisitive faculty, man begins in infancy the process of adaptation, taught by the Great Teacher himself through the instinctive and educative faculty of his being, ascending from the unerrable acquirements of first truths, to the comprehension of truths natural and revealed; until, refining more and more from the grossness of earth in his approachable resemblance to God, exhibiting in the two extremes of child-like simplicity and exalted intelligence, the perfection of humanity. "For the end of learning is to repair the ruin of our first parents, by regaining to know God aright, and out of that knowledge to love Him, to imitate Him, to be like Him, as we may the nearest by possessing our souls of true virtue, which, being united to the heavenly grace of faith, makes up the highest perfection."†

Scarcely subsidiary to this divine purpose, but indeed correlative with it, is the relation and duty of man to man, how and in what manner he shall advance the well-being and happiness of all mankind, recognizing in each individual the fullest extension of the di-

* *Menschenbildung in ihrer Vollendung ist das Ideal wornach wir streben, von dem wir aber mit Paulus sagen: nicht dass ichs schon ergriffen habe und vollkommen sey; ich jage ihm aber nach, auf dass ergriffen möchte.—Wochenschrift für Menschenbildung.*—Education in its perfection is the ideal after which we strive, of which we might say, with Paul, "Not as though I had already attained, either were already perfect, but I follow after, if that I might apprehend."

† Milton.

vine law of "doing unto others that which he would they should do unto him." The application is hidden in the mystery of knowledge, not the mere knowledge of utilities, but that higher wisdom which associates mankind in one fellowship of love. Inclusive, therefore, intelligence involves all temporal good, which reconciles contraries, quickens every enjoyment, and multiplies the means.

That "knowledge is power" is familiarized as an axiom; and, however incomprehensive the capacity of that power, its efficacy is no longer problematical, for, by a principle essential to its existence, nations gain an ascendancy proportionate to their knowledge, which, further carried out, is also predicable of societies, of families, and of individuals. Every thing surrounding and influencing man witnesseth the beneficence of knowledge, as much so from the argument of his wants, as from the pleasures of fruition. But, notwithstanding the dignity and usefulness of knowledge, and though man by his nature is adapted to possess it, he exhibits a repugnance, for which ignorance is no plea, and in his insane opposition to its progress presents an inexplicable contrary in his self-love. He beholds the elements changed in their relations, ponderous bodies transformed into aerial, or condensed again into fluids, intractible metals fashioned into the thousand utilities of civilized life, "the great globe itself and all which it inhabits," touched by the Ithuriel spear of intelligence, submissive to his will and applicable to his wants. Yet must he be driven as a bondsman in the pursuit and acquisition of this (to him) creative power; at best to be draggled in the mire of a money-making sensuality, disfiguring the original image of God into the likeness of mammon, and turning the temple of the soul into a "house of merchandise."

But, reflecting upon the virtue of knowledge, both as it concerns the temporal and spiritual interest of man, what is the cause of the unnatural and parasitic evil attached to it, or whence comes so strange an anomaly in his conduct? Of evils, the most prominent are the tyranny of prejudice and the tyranny of teaching; the former tyranny will remedy itself if the latter and greater evil be removed, inasmuch as the tyranny of teaching not only seals up the innate inquisitiveness of the soul, but, by a mistake of the cause, knowledge is abhorred as the tyrant itself. By this tyranny over the tender spirits of children, good and evil are substituted for each other by an irresponsible choice, and which years of experience can hardly correct in the thinking and conduct of man.

But it is not the severity of coercion which is merely included in

the word tyranny, but the whole imperfect system of education pursued in too many schools in Great Britain. Can there be a harsher tyranny than the ill-directed teaching of an unskilful master?* for whether learning be obnoxious from the tediousness of the process, or from the stripes of the rod, is of little consequence in the result. Without ascending to the heights of prophecy, but by an historical comparison of the social and intellectual character of all nations in all ages, it is neither a superstitious nor a sceptical opinion that, as long as the school discipline is characterized by its present empiricism and dull formality—as long as schoolmasters are the despised and needy huxters of a teaching trade—as long as the office is prostrated with all that is abject in circumstances and debased in opinion—so long will the nation present a godless, soulless, degraded character, in continuous retrogression from the presence and communion and image of God, into a lost and irrecoverable heathenism.

“Amidst all the shocks and revolutions of empires, a good system of public instruction would serve as a common insurance of this realm. And if it occupied the attention of governments as much as the incitements to avarice and the ambition of false glory, we might, to use a metaphor, admire the future prospect of *Astrea* descending from heaven, and reviving the reign of innocence and concord among men. Hitherto the earth can only be examined as a vast theatre of depopulation and waste; it is surely time to contemplate the dawning of reason, happiness, and humanity, rising from among the ruins of a world which still reeks with the blood of its people, civilized as well as savage.”† But, however badly constituted the education system be, what is further to be deplored is, that even its slender benefits are partial and exclusive; as if difference of circumstances dispossessed man of his reason, expunged the divine image, and retroverted him into his irrational and animal being. The only knowledge the poor man is permitted to imbibe is to be sucked in through “the pipe

* The writer of this essay does not impugn the intellectual and moral character of schoolmasters indiscriminately, but rather questions their possessing what to him appears of much higher importance, inasmuch as it precedes knowledge itself—the temperament or genius of teaching, and the philosophic understanding of the compound nature of man. The qualifications, indeed, of a teacher of youth, are so multiform and rare, as it were, the fruition of *all knowledge* and excellence, that, as Milton expresses, “I believe that this is not a bow for every man to shoot in that counts himself a teacher, but will require sinews almost equal to those which Homer gave *Ulysses*.”

† York.

of a sectary," which, partly from the early drenching process of its administration, and partly from its sameness and insipidity, leaves in maturer age scarcely any remembrance beyond the shadow of a creed.

On the other side, the maximum of education is seldom enough to exalt the soul above the mere doings of the day. Trained in what is aptly called a "commercial school," the pupils leave it scarcely more intelligent, and far more impure; or those who hang their satchels against the walls of a "classical academy," do they derive more useful knowledge or less moral defilement? or the inmates of the colleges and universities, do they learn to seek for wisdom as for hidden treasure? The same bad system of education prevails (more or less) from the universities to the village school, every day augmenting the overwhelming evil of a national, moral, and intellectual depravity.

Let it be remembered that it is knowledge which has raised man above the barbaric character of the savage, which has supplied him with every novelty and administered to every want. If, then, even so far as temporal good is concerned, the education of the *few* has done so much; what might not be looked for, with no vain prophetic eye, were all men educated!

Education is the interest of individuals, of societies, and of the world. Education is the strongest security of law, that moderates innovation, and by an universal self-respect establishes a voluntary submission to authority.

To redeem mankind from the superstitions and grossness of error Education must be elevated into a science, presiding over every other species of knowledge, thereby raising the first formative principle of the soul into an inclination for truth, man may regain to know God aright, and represent in his intelligence and goodness the image of his Maker. But the science of education, to be perfect as a whole, must be perfect in its parts, otherwise it will soon decline to its old corrupt and distempered state. The elevation of the duties must, therefore, involve the elevation of the office; and there can be no greater argument for "the expediency of elevating the profession of the educator" than the expediency of proving it.*

* Das Bedürfniss eines solchen Blattes spricht sich durch nichts so bestimmt aus als dadurch, dass diese Frage geschieht. * * * Wenn ein Tanzmeister, ein Schauspieler, ein Sänger, ein Bereuter, ein Dilettant der Mode und des Luxus der in seiner Kunst einigen Ruf hätte, ein Blatt für die Bildung in derselben ankündigte, kein gebildeter Mensch unserer Zeit würde fragen: wozu das? Aber bei der Ankündigung eines Blattes für Menschenbildung schwebt diese Frage auf den Lippen von so vielen.—

CHAPTER II.

THE PRESENT DEGRADED STATE OF THE OFFICE.

THE dignity of an office is the authority of its law; whether the productions of science and the arts, or the constitution and fabric of a government, which necessarily precedes the authority or office of either, the office ascends above the works by which it was created, and becomes their law; and it is the just and only security of knowledge, that as the faculties of the soul are subordinate to the office of the soul, so the offices of learning are pre-eminent over learning itself, as the model and representative of their utmost reach. Nor can the dignity of an office be subordinate but by the destruction of its duties. Neither the indiscretions nor crimes of the servants of the church, the senate, nor the bar, could deject the dignity of either offices, whereas each office would appropriate to itself the virtues and celebrity of its officer. These professions have a fixed elevation in society, that not even the loosest conduct of their professors could subdue; in the comparison they alone would be vitiated in public esteem; in all such instances the men sink and not the office, which must be co-existent and co-extensive with the utility and excellence of its duties. There is one violent exception to this rule. The office of teaching derives neither interest nor importance from the character of the teacher, or the reputation of the taught. Even that first and most vital of offices, which gives to the soul of childhood its first impulses, illumines it with the first rays of intelligence, and quickens the new-born affections and tender sympathies of a pure and undefiled spirit, is prostrated among all that is abject in circumstances and contemptible in opinion. The office contrary to a general law is subordinate to the duties of the office, so that no fixed character is attached to it, but it is higher or lower relative to the station and success of the educator. Familiarized as we are with the degraded state of the educative office, and regarding schools as a mere trading occupation.

Wochenschrift für Menschenbildung.—The want of such records is proved by nothing so much as that this question occurs. If a dancing master, an actor, a singer, a modist, or a dilettante of fashion and luxury, celebrated in his art, should announce a work for instruction in either art, would it be asked, wherefore? But with the announcement of a record for education, this question rises upon the lips of so many.

we can hardly comprehend the nature of the evil or see any degeneracy in the office. The early arbitration of ignorance cast education as the ignoble business of slaves, and through the successive ages even up to this period, the primary opinion, strengthened more and more by error, has thickened into a proverb. Those great and good men who at all periods have been alone worthy to fill so sacred a duty, disgusted and driven away to the more solitary pursuits of literature left the divine trust of teaching truth and goodness, to the herd of promiscuous and ignorant pretenders, who being qualified neither in the knowledge of God nor man, have turned this spiritual magistracy into a grovelling and despicable trade, dragging the highest moral duty to the lowest bent of human degradation. It is no marvel therefore the "profession of the educator" should be so condemned nay contrariwise would be a miracle. To depict more firmly this declension, let the profession be compared with itself and with that of the church. The multitude and varied character of schools, drawn in this comparison is another and incidental evil, what could be more curious than to trace the gradual and the long descent, from the regal professorships of the universities down to the poor half-starved attenuated village school-master or the two pence a week dame schools, where a number indefinitely fixed of poor little children are huddled together in a dark, cold, damp cellar or kitchen, and, ere they can lisp, learn the truth (baptized in tears) that "man is born to trouble"; from the observation of these "seminaries for the young" is it strange that the office should relapse to the lowest place in public opinion? or that the mere name of school should carry with it something abortive and fatal to improvement. But the evils of these schools, are also the evils of those aspiring to the more respectable term of "Academy," modified they may be, but the same evils prevail in all; though their hideous complexion be more or less concealed: it matters little whether it be a two-penny dame school or a "seminary for young gentlemen or ladies,"* poverty, distress, and ignorance of the high virtues of their calling prevail in the same in-

* Nothing is more at variance with common sense, than the silence of even the first writers on education, as to the instruction and right bringing up of *females*, as if those from whom we derive our first and most lasting impressions, might be left to the mere chance of circumstances. Let it not be forgotten therefore that the writer of this essay, though he does not particularize the name, he associates *all* mankind without reference to sex in the essential reparative process of a better education, and that no general remark can apply exclusively to either sex.

corporated and indissoluble compact, and conspire one and all to sink the office deeper and deeper in public estimation. But "up to reascend through utter and through middle darkness" to the most elevated rank of the profession; the comparison is striking, but so indefinitely remote from the opposite extreme as not to be obvious. The office now assumes a new existence has metamorphosed its lean and withered look into the full-blown plethora of excess, framed and gilded with the extrinsic gewgaws, mystical sessamées, and attalantan wealth, of the colleges and universities. But even in these few, far separated instances of the elevated dignity of the "profession of teaching" the elevation is carefully concealed that no identity is felt between the two extremes. By the jugglery of pride, the teacher is transformed into the "professor" and the office is lost sight of in the "professorship." The benefit of a comparison is therefore dead to the public who can hardly recognize an alliance where not only the circumstances but even the designation is exchanged.* The distinctions so widely drawn between the qualities of teaching, are not less carefully preserved, that it would call for a more than ordinary discrimination to trace a connection; while a ban excommunicates and vilifies the office of the educator, the ministerial agency, which however worthy of the highest honour, must be by a natural succession posterior to the first truth of education, is yet beheld with an exclusive and therefore tyrannous reverence, as though the efficacy of prevention was subordinate to that of cure, or the building up of the tender and obedient spirit of youth, to a more willing disposition to receive the truth with meekness, were an object less valuable to the world or less acceptable to God than the tardy conversion of men grown old in sin.†

"Lycurgus‡ also in the institution of the Lacedemonian commonwealth took no care about learning, but only the lives and manners of their children, though I should think that the care of both is best

* Let it be understood that the author does not condemn the elevated position and name of the professorships of our colleges, he laments rather that the *whole system* of education is not equally elevated in importance; the comparison is not meant to be *invidious* but merely to make the evil of such extremes more obvious.

† "Einige sagen, der Unterricht fängt an; die Uebung und das Beispiel vollendet. Wir sagen umgekehrt, die Uebung und das Beispiel fangen an, und der Unterricht vollendet."—*Wochenschrift für Menschenbildung*.—Some say instruction should begin, practice and example perfect. We say, on the contrary, that practice and example should begin, and instruction perfect.

‡ Tillotson, *Concerning the Educating of Children*, Sermon 52.

and that learning would very much help to form the manners of children, and to make them both wiser and better men, and therefore with the leave of so great and wise a lawgiver, I cannot but think that this was a defect in his institution ; because learning if it be under the conduct of true wisdom and goodness, is not only an ornament but a great advantage to the better government of any kingdom or commonwealth."

The original dereliction of the office has thrown the whole structure of teaching into confusion and what by its nature, should be consistent with its object (that is the understanding) is distorted into the uncouth and useless finery of fashionable accomplishments. To annihilate the honour of a profession is to abolish its importance and to strip it of the only legitimate inducement which can excite its members. Were the office of a General no more honourable than that of his soldiers, it would instantly subside to the same level and degradation. It is the conventional authority of a law, recognized by a common consent, which constitutes rank ; but the value of the educative office should not be merely an arbitrary assignment, else would it soon decline from its sublime attitude to the plane of those numerous and lower vocations of the arts and sciences.

To compare great things with small "the profession of the educator" should resemble the dignity of Art, on which its professors look with a proud veneration always aspiring to attain a name co-existent with its greatness, working up through all its duties to a mutual and reflex participation of its glory.

CHAPTER III.

THE DEGRADATION OF THE EDUCATOR.*

THE degradation of the educative profession must involve the degradation of the educator. Between the dejection of this office and

* Und nun Erzieher, welchen Namen du auch habest, und aus welcher Gewalt und mit welchem Recht du den Dienst des Heiligthums unserer Natur, die Sorge für die Unschuld, die Bildung der Jugend, die Erziehung der Kinder, als dein Amt, als deinen Beruf ansprechen magst,—darfst du es denken, darfst du es aussprechen : die Art und Weise wie du dein Werk treibst, deine Methode, gehe aus der innern Würde der Menschennatur hervor, sie nehme dieselbe ganz und rein in Anspruch, und erhebe die Kinder zur

that of the officer there exists this essential variance, that the former implicates the latter, but not conversely. The debasement of the one is general, of the other, individual; were it otherwise, the instability of the laws would abolish the authority of the office. That universal admission makes this rule absolute, is an experimental truth. Whatever might be the character and genius of a teacher, though he should possess the highest faculties of teaching, though society should aid his plans by all possible means, and though his scholars should present in their conduct and understanding the most unlooked-for goodness and intelligence, yet would not the office itself sustain any elevation; his efforts would be regarded as a sacrifice to his philanthropy, genius, with an unexampled humility, bowed down to the laborious and disgusting duties of a despised profession. The office would neither receive nor reflect any portion of the honour of its agent.

Seeing, therefore, the utter prostration of the profession of educating, and that the importance of the teacher is personal and extrinsic, the whole multitude of schoolmasters, who get a precarious subsistence by teaching, participate alike in the debasement of their office; and, inasmuch as it throws them upon other and illegitimate resources to rise into notoriety, plunges this most sacred calling into all the dirt and defilements of an unprincipled commerce.

The educator, depressed beneath the dead weight of its opprobrium, so baneful both to the virtues and faculties of the mind and to worldly advantage, that hardly any persons but those who had been already schooled by penury and despair (thus trained to degradation)

Kraft und zum Bewusstseyn derselben als ihre nothwendige Folge? Darfst du das nicht aussprechen, aus welcher Gewalt sprichst du denn den höchsten Dienst des Heiligthums unserer Natur, die Sorge für die Unschuld und die Bildung der Jugend als dein Amt an? Mit welchem Recht treibst du ein Geschäft, das beim Mangel an innerer Weihe, ewig nicht dein Amt, ewig nicht dein Beruf seyn kann?—*Wochenschrift für Menschenbildung.*—And now, educator, which name thou also hast, thou whose office is the service of the sanctuary of our nature, the guardianship of innocence, the education of children, the cultivation of youth, by what authority, by what right, canst thou claim thy vocation? darest thou think of it, darest thou declare it? the way and manner in which thou carriest on thy work—thy system, does it arise from the internal dignity of human nature, takes it that pure and perfect claim, and does it, as a necessary consequence, elevate children to the power and to the consciousness of the same. Darest thou not acknowledge by what power thou claimest the highest service of the sanctuary of our nature—the care of innocence and the cultivation of youth—as thy office? By what right dost thou carry on thy vocation, that, with the want of that internal consecration, can never be thy office, can never be thy calling?

would adopt the office of teaching. Among the host of the craft, how few of the lower order of schoolmasters have received any other warranty for the business of a teacher than their own compulsive wants ! Failing in every other pursuit, either from a deficiency of integrity or of common sense, they can most easily adopt a business that requires no other patent than a sign board, and no capital but their scholars. Frequently is this adoption the last expiring grasp of beggary, which, though a little protracted by every invention of trickery upon the public, is but a step from the workhouse or the gaol.

But the degradation of the office carries with it other and far-ramifying evils. The sub-teachers, ushers, assistants, dancing masters, French masters, drawing masters, and all those numerous addenda of the "classical and commercial academies," they all participate in the pauperising depression of the trade. The fact is well attested that more than a moiety of the charges paid to them by their pupils, through the hands of the master of the school, is not unfrequently subtracted for his (the master's) own purse : and even a heavy discount is further deducted from the already reduced pittance. Slaves to poverty and craving competition, they are forced unshrinkingly and silently to submit to this skinning process ; continually exposed to the tyrannous cruelty of an avaricious and indigent employer, yet too abject to resist. But to examine closer into the interior of the system : still more pitiable are those wretched and isolated beings termed Ushers. It would not be supposed that any rational man who retained one vibration of sensibility could submit to be the meanest slave in an office, bowed down to its lowest prostration, subject unceasingly to the stinging virulence of a superior in beggary ; yet lamentable is the fact that hundreds of tender and delicate minds, are rudely crushed into a service thus abhorrent from every relation. But it is a necessity of the persecuted Usher that he must be either the enemy of the master or of the scholars. The consequence of the former would be an insupportable suffering ; he has no alternative but to become the enemy of the school. The hated spy of the master, every species of deception and boyish fraud is quickly acquired and practised to elude his watchful suspicion. He becomes the creeping reptile of the school-room and the play-ground—a scorned and hated thing, whose very presence brings penalty, a stranger to every grateful emotion, excised from the pleasures and confidence of the

community, a branded solitary in the circle of life.* And this abhorred inquisitor is the teacher and companion of inexperienced and ingenuous youth. But the condition of the educator is in no instance so baneful as to those good and upright men who strive vainly to elevate, by their industry and talents, the dignity and utility of their office.

In vain they direct the full tide of their energies to advance the well-being and improvement of their pupils ; with all their knowledge and humanity, yet uneducated by early and long discipline to the mystery of the office, and perhaps with the fullest benevolence, yet void of that necessary and complex wisdom of the physiology of man, they realize with the labours, the repeated disappointments of Sisyphus. The oppression of domestic cares and professional anxieties soon wears through their first integrity of purpose, like the fabled dragon's teeth that, being sown, came up armed men, their vexations multiply upon themselves, until at last, overwhelmed by the meanness of their office, and the incidental miseries of their circumstances, they slide into a state of irrecoverable moral and intellectual apathy. Those who aimed to be illustrious for their excellence and usefulness, failing of that, turn their deadened minds to their mere worldly success. A contradiction to a general law in the low subaction of the office has created a solecism in truth, and " honesty is found not to be the best policy." The moral virtues must descend to a standard of expediency, and new theories, new plans, new vagaries, eject truth and honesty from the scheme of a degenerate and unprofitable profession. The

* The manner in which private schools are mostly supplied with assistants, by means of school agents, is productive of great abuses ; the teacher and master, who correspond through the agent, are completely at his mercy and discretion. If the assistant advance a sufficient fee, it matters little as to his qualifications, or the injury the school will sustain by his admission. " It is an unfortunate coincidence that, while it is the interest of the master to retain a good teacher as long as he can, it is the interest of the agent to keep up a constant fluctuation and removal of assistants. This end is gained in several ways, whether intentionally or not. 1st. By putting a good man into a bad situation. In this instance the assistant will not stop longer than he can avoid. 2nd. By putting a bad man into a good situation. Here the master will not keep him, if he wishes to stop. 3rd. By offering a better situation, as an inducement for change, to a man who is going to college in six months. The assistants are, of course, always on the look out to better themselves ; and the agents are, of course, ready to help them if they can."—See page 201 of the second publication of the Central Society of Education.

startling "prospectus" and "advertisement" impart to the world the merits of the "establishment;" the advantages of the "system" are set forth as nicely and as numerous as the "bill of fare of a Parisian restaurateur; and the holy and dignified offices of education are blazoned about the kingdom like the preposterous tirado of an "universal specific." To examine not too critically these "systems," so loudly vaunted of in these "establishments," and to compare their fixed and inflexible "process of education" with a rational and wisely-yielding plan, necessary to accommodate the instruction to the many and differently constituted minds of a school, the fallacy of such empiricism is palpable. Nothing can betray a more utter ignorance of the requirements in the profession of teaching than to erect a stern and invariable theory, as if it were an easier task to wrest the hereditary and already biased minds of a number of children to one undeviating course of learning, than so to modify that instruction as best may suit the idiosyncrasy and development of their particular mental endowments.* But such preposterous fashions need no exposure; arising from the ingenuity, not the integrity of masters, who, judging rightly of the ignorance and credulity of the public on matters of education, fail not to reap the reward of their novelties. Justifiable frauds end often in severe retaliations; thus, the sinful apathy of a people towards the debasement of this inestimable office rebounds upon them in the curse of a foolish and vicious generation. The trade looks out through the whole system of education, either in the profitless routine of the day, the specious method of its periodical duties, the senseless loss of time wasted in frivolities, or the criminal abduction of one-third of the pupilage to the advertising ceremony of "half-yearly rehearsals" and "public exhibitions." Their pleasures, which, in a wisely-governed school, would be a mere change of pursuit, not a premium for pain, are, like their studies, set off with an advertising novelty. The restless spirit of youth, which asks a wider range than earth itself to satiate its curious hopes, is caged within the limits of fifty or a hundred square yards, divided into the duodecimal locations of a gymnasium, "palæstra," and "curriculum," where the *cives Romani* of the "classical academy" are recreated; the silent with the boisterous, the sober with the gay, the tender with the cruel,

* First endeavour, as well as you can, to discover the particular temper and disposition of children, that you suit and apply yourselves to it, and, by striking in with nature, may steer and govern them in the sweetest and easiest way.—Tillotson, Sermon 52nd, p. 483.

the pious with the profane, all crowded together in one odious compact. But the iniquity of these systems stretches to the terminus of the plan, and is not less embodied in the religion and worship of the school; trailed in pairs through the streets to the sanctuary, the pupils are there spread over the seats most elevated; the assembled congregation count their numbers and admire their discipline, little heeding the effect of these hebdomidal constraints upon minds that retain little but their aversion. The sectarianism of teachers is not an unprolific advertisement; professing to give a *liberal* education, "they convert into a law of hate what Heaven gave us as a law of love, and degrade seminaries for the universal mind of the country into rival garrisons for faction."* Happily nature is stronger than even custom, and thus the officiousness of sectarianism, coerced upon the minds of the young, is rendered vain by the tyranny of its coercion.

Another of the evils springing up into the monstrous structure of education, and one of the pitiful substitutes for a nobler plan, is the value set on the titles of professors; such an error is altogether English, the tatters of the old tinsel of feudal times. This admiration of a college patent stands in the way of a fair enquiry. Pre-supposing that title were an accurate certificate of high attainment and moral excellence, there is still a higher and primary wisdom to be required, which is the emendation and fruit of genius disciplined for the office. Knowledge is merely the material, the form and fabric is the fashioning of *love*.†

Such is a lenient sketch of *some* of the evils arising from the degradation of the office through the agent. These evils of schools are wrongly referred to mere pecuniary causes, and undoubtedly monetary embarrassment must always be an obstacle in the quiet progression of any profession or duty; but the first and real cause, not only of one, but of every other evil, is the degradation of the office. To elevate the circumstances of the educator by a pecuniary disbursement, without first elevating the profession, would but have the effect of raising the officer above the office into a dosing state of apathy and slothful indifference. Under such a change the present evils would be enlarged and multiplied; for the only remaining active sti-

* *Wyse on Education Reform*, a book that should be the companion of every parent and every person.

† "Was keine Gewalt des mächtigsten Herrschers erschafft, das schafft und bildet in Demuth die liebende Kraft."—*Wochenschrift für Menschenbildung*.—What no power of the mightiest ruler can create, that love, in the power of humility, creates and fashions.

mulus would be removed, and the whole soul of the school would be laid fallow under the dull monotony of a senseless routine.

CHAPTER IV.

THE RESULT OF THE DEGRADATION OF THE OFFICE UPON THE SCHOLAR.

THE natural law that "every thing is produced after its kind," is equally true as a moral law ; for the character and conduct of man are but the life and practice of those first and generative impressions of education, and which are divinely and naturally prophetic of the good or evil tendencies of his mind. The divine prediction concurs with a natural corollary "that the sins of the father should be visited upon the child ;" but the law is further extended in its fulfilment, and the sins of the child are reflective in their consequences upon the parent. But what is here said of the parent is equally predicable of the teacher, and the evils of a bad education are retaliated upon the educator and his office. Were it not that the commercial vigilance of the nation kept the public mind in so constant a state of restlessness, the ill success of the present educative system could not fail to claim their indignation. Can there be a more melancholy picture than a great and powerful nation, gifted with the highest privileges of man, religious, moral, intellectual, and worldly, yet degraded in intellect and vitiated in morals ? The spirit of a pure and undefiled religion, offended by our superstition and sceptical faith, may ere long forsake our altars for another and more tractable people, who will not, with a proud and stiff-necked sectarianism, disinherit the power of the spirit from the pre-electing influence of that law of intelligence given unto man, "that he should train up a child in the way he should go," engraving the image of God upon the infant mind, that it may hereafter recognise the divine likeness impersonated in the "Great Exemplar" of truth and holiness. Generation succeeds generation, and ages wither away ; but the day still dawns upon a world full of the miseries of error and sin. The creator has formed in man a law of love, which, by the curse of an evil education, is turned into a law of hate.

The first instinctive perception of life is love ; the maternal nature is love ; from their mutual sense love is born and nurtured ;

the infant inspires love through all its perceptive being ; from sense to sense, in the new developing capacities of its nature up to childhood, love is the element of life and growth. Intelligence is the rational image of God ; love is the natural similitude of man. But another age arrives—the educative age ; the tenderness of home is exchanged for the harshness of school. Three relations influence the education—that of the master, the scholars, and the school. The features of the masters are already depicted.

Not to dwell upon the personal and domestic character of the master, which, however, necessarily enter into the process of education, the teaching system is not only bad, but uncertain. Had a schoolmaster the vision of Elisha, and could unobserved review the conduct of every scholar, he could not instruct them all, the number effectually holds him remote from the individual, and the chances of his examination are so uncertain as to encourage idleness, from the chance of escape. "The vital and essential part of a school is the master ; but at a public school no boy, or at the best only a very few, can see enough of him to derive any considerable benefit from his character, manners, and information."^a

Moreover there is this disadvantage without perhaps an exception, that the acquirements of the master are not general enough, he may be well adapted for giving instruction in one or two branches of education, and to the study of which his preference has addicted him, but of that wide and universal knowledge of his vocation, which is rather a supervision of the whole than any exclusive part of teaching, masters are deplorably ignorant. An educator should be like a skilful commander over his army governing individuals through accessories, but all through himself, continuously vigilant over the whole school, sitting in his high watch tower, directing and aiding the whole monitory process. But with a degraded office, and a vitiated officer, education deviates into innumerable eccentricities to fit the caprice and profit of the educator. The relation of the scholar to the teacher is, therefore, in every way ill adapted, either for his happiness, goodness, or knowledge. The relation to the scholars—a child is the surest and sweetest teacher of a child ; for whereas men content themselves with words, a child can teach only by things, and first impressions are not only the most lasting, but are the quickest learned and cannot be forgotten,

^a *Edinburgh Review*, vol. xvi. p. 332.

because, unlike words, things cannot be reasoned away. The departure of man from the unerring wisdom of nature is ever marked by anomalies. With a vain assiduity he pursues a vague and remote enjoyment forgetting that happiness as a state depends upon present particulars. Parents labour to secure a future and uncertain good, at the certain loss of the present happiness of their children, and under the plea of making them wise in age, they sacrifice the seventh and most pleasurable portion of their lives to the miseries and vices of a school. There is no earthly suffering comparable with that of a tender and sensitive child in a large school. The afflictions of man however severe are softened by sympathy or repelled by religion and philosophy, for "the mind is its own place" and transcends every trouble: but a child in its innocence, unacquainted with grief, inexperienced and helpless, forsaken of all that makes life joyous, the victim of school restraint and compulsion, harassed by selfish and cruel companions and deafened by the riot and noise of their contending tyrannies, is a misery that might overwhelm the mind with sorrow and dismay. Human nature is first abused in childhood to be disabused in manhood, as if the sole business of education, divine and human was alternately to corrupt and purify the mind. Were the system of education conformable to nature, schools would become homes, school-masters fathers, and children compatriots in universal love. For the love of the young is of so social a quality, that they attach themselves by a mutual sympathy to each other; there would then be no invidious and detrimental comparison between home and school, parent and master; a child would find encouragement where now it meets repulse, and the novelty of change would interest the attention, not alarm its fears. But one hard heart depraves a community, for the tyranny of sin is obstinate to overcome goodness; thus the tenderness of infancy and childhood is effaced by the harshness of a corrupt education and an iron fellowship associates mankind. Evil like wealth is self productive, and the primary sin of schools is generative of almost every other sin in the catalogue of the heart. Cruelty presides over time and place, and the school-room and the play-ground are by turns the scenes of selfishness, and childish arts.

If it be argued in apology for such schools, that they the better adapt youth to the world, it cannot be denied, inasmuch as that the world can hardly discover to them a novelty in vice; the difference is only in the object. What can demonstrate the sinfulness and foolishness of man so clearly as the sinfulness of the child, who in-

deed is his type and monogram "for there is no man alone, because every man is a microcosm and carries the whole world about him."*

The relation of the school.—The humiliation of the profession through the educator, has most effectually abolished that course of education which would be most suitable, to the universal and individual mind. The educator receives no authority but his own will, nor is answerable, for the efficiency of his plan. Children are sent to learn, the quality of that learning is generalized under the term liberal or classical education. This monitory process includes the mechanism of writing, spelling, English grammar, arithmetic, elementary geography, and the church catechism, to which elaborate course of study may be added the higher claims of instruction in the classics, the French language, and the use of the globes, a few et ceteras fill up the "prospectus," crowned with the finishing accomplishments of the "gentleman and the scholar" as dancing, fencing, and elocution. There is no speculation more fallacious than what in the world is called a liberal or a commercial education. A liberal education, however much it may promise in the school prospectus and school system usually ends in the acquisition of a certain rote knowledge of the latin grammar, and a very loose way of translating some of the school classics, which has been so drummed into the mind, or rather memory of the scholar, that they ever after look upon classical books with indifference or disgust.

The useful knowledge of grammar, writing, and cyphering, and geography which belong alike to the classical and commercial schools, is so inadequately taught, or at least so indifferently learned, that knowledge of one or all of these studies is with most persons obtained in after life, and of which, the greater number of respectable persons are after all comparatively ignorant. How few are there of the liberally instructed, who could analyze a single sentence grammatically, or even apply one rule of all they had formerly learned; if it were honestly confessed the greater number of persons are egregiously ignorant of the philosophy of their own language, and not until after the experience of many years are the simplest rules understood, no wonder therefore that the speaking of most persons is hesitating and their language incorrect and obscure. Writing which is so plain and easy an art, (after consuming many years in labouring at it) is generally no further useful than to kill

* *Religio Medici*, p. 160.

time, for of all those who are said to write a good school hand, the greater part of them leave the faculty behind them and write ever after a hand most fashionably illegible. Cyphering is made another of the school nuisances, and has had as many sighs and tears poured over it as the altar of Nemesis herself. The knowledge of figures is but ill acquired for so much pain and labour, and usually ends in a sort of running knowledge of the multiplication table, and an indistinct idea of the rule of three: were it not for the responsibility and necessities which prompt the energies of men (in after life) to acquire a better knowledge of these studies, there would remain but the shadow of their existence. As to geography which might be so pleasantly learned in a month, children's memories are filled with a multitude of names of countries, provinces, capitals, towns, rivers, &c., in fact, treading beetle-like from point to point over this vast globe, that at last the memory presents a sort of chaos, a rude and indigestible mass that is too insupportable not to be cast off and forgotten. The sciences, as botany, natural history, mineralogy, geology and many others, are seldom named in the prospectus of the most celebrated establishments. The only approach they make to these studies is through the medium of some poor itinerant lecturer. Those studies which could be taught in the green fields and forest wild and wherever nature was to be seen, when the mind might be questioned by the spirit of the universe, and the sports and joyousness of childhood and youth, would receive a more exquisite delight from the curious and ever new phenomena of nature, unfolded to them through a master intellect all this is hidden from the inquisitive and apt minds of youth, which if wisely and pleasantly inculcated would fill the world with philosophers. School-masters and parents coalesce in the annihilation of a noble and elevated spirit; for they both misapprehend the real object of school; the teacher must be a conformist to the prejudices of the parents, prejudices which originate from their own individual circumstances, so that to get on at school involves perhaps twenty different opinions with as many parents, but which getting on is expressive of that tension without substance that is quickly followed by an irrecoverable collapse. But even with this liberal course of study that is to adapt a thinking rational soul for the high purpose of its existence, in its relation to God and man, the moral department is sunk to a few conventional rules, or hushed up in the quietizing specific of "religious formalities." Nearly all our pupils (says the prospectus of one of the most celebrated schools in England) belong to the esta-

blished church. Our morning and evening prayers (which we read with strict regularity) consist of portions in the liturgy. On Sunday our domestic service includes the greater part of the liturgy and the lessons of the day." This, of course, is in addition to a regular attendance at public worship. A part of the time between the hours of service is employed by the pupils in committing the catechism to memory, in transcribing portions of the Scripture or in reading the same with a view to a subsequent examination. Inclusive in these duties rest the whole moral code of the educative scheme in most schools. Valuable as are "religious ceremonies" in raising the soul above a dull and stagnant moral propriety, to the contemplation of a power infinitely glorious over the highest rational excellence; yet acting upon the mere senses of children with no other or deeper consideration of the soul, and unassociated in theory with the example of love, may discipline them to a sect, but will never approximate them to God. "Many parents (and teachers) according to their best knowledge and apprehension of religion in which *they themselves* have been educated, and too often according to their zeal without knowledge, do take great care to plant little and ill grounded opinions in the minds of their children (or scholars) and so fashion them to a party, by infusing into them the particular notions and phrases of a sect, which when they come to be examined, have no substance nor perhaps sense in them; and by this means instead of bringing them up in the true and solid principles of christianity, they take a great deal of pains to instruct them of some doubtful doctrines of no great moment in religion and perhaps false at bottom; whereby instead of teaching them to hate sin, they fix in them schism and teach them to hate and damn all those who differ from them and are opposite to them."* But this compulsive submission of the educator to the doctrines of any particular church, creates another and personal injury to the scholars, for either they must all in the school, wear the same sectarian livery or the worst evil of superstition will be numbered with the vices of the school, and schism and the hate of schism, will be added to the sins of childhood.

The persecution of children is active as their natures; it pursues its object with relentless avidity, and everything that could be associated with the subject of religion is converted into a missile of offence against the innocent victim of their scorn. The prejudices of children are derived from their parents, whose opinions (to them)

* Tillotson, Sermon 52, p. 486.

are naturally infallible ; the bigotry of home is interwoven in the memory of home, and the unchristian-like intolerance of age is thus rekindled, with an undying fire in the heart of the child : fanned and fed by the encouragement of the many and the opposition of the few, it flames into a beacon light of savage superstition and bigotry. With the specious empiricism of a mis-called "religious education," is it strange that the faith of the parents should wax warm, and prognosticate of their children an illustrious race of good and wise men ? But with this general looking for of wonders, and prophesyings of a better and regenerate time, there can be discovered no harbinger, no avante-courier in the van of this golden era, though mankind are still prescient of its coming. The studies of schools begin and end with the mere elements of knowledge, and leave the mind inoperative and incurious after truth. Intellectually and morally the nature of man is depressed below its capacities and purposes ; and even with all the violence and ardour of some masters, the progress of the scholar is marked by the memory more than the understanding of their lessons. The good will of the teacher who ignorantly constrains the mind of youth beyond its own powers and inclinations, and which it might be more slowly brought to approve and accomplish as an agreeable study, causes an aversion to all kind of knowledge, and which their minds may never afterwards shake off, to the injury of themselves and the world. So prevalent is the evil of coercion in the misguided attempt to accelerate the progress of learning, that it may be fairly presumed that mankind, by this means, have lost the valuable efforts of innumerable minds, which, had they at first been encouraged by an easy and agreeable mode and subject of teaching, would have kept ever after in the pursuit and discovery of truth, to the great and universal interest of the world.

Systems of education, however ingenious in theory, are often fallacious in practice. The God of Nature and Revelation has opened to man the true and only way of truth : for man to "know himself" involves the complex relations of all human knowledge and wisdom.

The first and principal defect in education, even before the defects of learning, is the resignation of the affections to the despotism of accidental circumstances. The affections are the elements of religion, and to train up a child in all knowledge, without keeping pace in the affections, is but to lend a splendour to sin.

"As I prefer learning united with virtue to all the treasures of princes, so I look upon the reputation of learning, when separated

from good morals, as merely infamy rendered conspicuous."* Are we not, as a nation, guilty of Eli's sin, and stand convicted before God? We strive (though vainly) to make our children learned and influential, forgetting the first law of nature and the simple element of happiness, "that we should love one another," which alone can truly raise our souls through those natural and coalescent virtues of intelligence and love, to the image of God.

CHAPTER V.

THE CONSEQUENCES OF THE DEGRADATION OF THE PROFESSION OF THE EDUCATOR UPON THE NATION.

As the degradation of the office of the educator necessarily complicates the degradation of its officer and his duties, either the advantages of a reformed and national education are questionable and vain, or the existing abuse and neglect of the office and its duties is a reproach against the tyranny, superstition, and ignorance of the whole kingdom. Either the Deity has formed men of dissimilar natures, and raised one above and one below a general and uniform law of nature (exhibiting a contrary scarcely conceivable), or the exclusion of one or *any* rational and fellow beings from the common property of truth, is the worst of tyranny against man, and a blasphemy towards God. But the injustice done to a people in this particular is itself a concomitant of the first great and productive evil—the degraded condition of the office; nor can there be a stronger argument of the abuse than the universal ignorance of its existence. To compare the English nation with itself and with other nations!

The religious diathesis of this kingdom, while it argues a prevalence of religious ordinances, blinds the public eye to the natural and first cause of every evil; at the same time that the spirit of the word is contending against the "huge overshadowing train of error" that vitiates and darkens the soul of a people, a degraded education is augmenting and multiplying error upon error in a far greater and more sure ratio. Thus the friend and advocate of religion is converted into an hereditary foe, and the eastern fable of

* Sir Thomas More. in a *Letter to the Tutor of his Children*.

Ormuz and Ahrimanes is realized as a truth by a christian people in the nineteenth century. The genii of good and evil are eternal antagonists; the temple of the moral Janus is thrown open, never more to close (until a better and wiser education is coalescent with truth), and man thus sacrifices himself to a perpetual warfare. Education, as it exists among the wealthier portion of the nation, is absurd and sinful. The huge collective vice of selfishness prevails throughout society, and effectually disassociates mankind; by the unrestrained contention of private interests community is exchanged for congregation, and every man's hand is against his neighbour. This selfishness of the man is the full-grown habit of the child, and the arts and cruelties and selfishness of the "play-ground" are the same, but with a wider expansion, acting in the world. The professions, spiritual and secular, which involve the compound interests of man, are, by this same original sin, tainted and corrupt even to their centre. The christian minister, whose sacred office calls for an advocate omnipotent in virtue and humility, whose soul from infancy, kept apart from vice and the defilements of sin, has grown up into a voluntary coalescence with the divine spirit, exhibits to the world the exemplar and mirror of Christ, and his conduct, more than his preaching, is eloquent against sin. Can this sublime exaltation of the moral nature be discovered in any minister of religion? Let experience testify: but that they do not attain this christian eminence and moral purity is their misfortune rather than their sin. How many are there who preach (and with a perfect will) the doctrine of universal love, yet exhibit a paradox in practice! how many dwell in admiration upon the virtue of humility, who betray too much of the world's pride! while others, in the continual strife with their besetting, because long habituated vices, sink into a despair of their own salvation. Such are the evil consequences of a corrupt education in childhood. Pure and undefiled religion has no corresponding reality, but is turned from the efficacy of a living example, to the inert service of a dull formality. Selfishness (the sin of the world) predominates over the christian church. "Under a pretence of zeal to God; bigotry violates the sanctuary of conscience, and creates an inquisition in the midst of the church. Erecting its own creed into a standard of universal belief, it would fain call down fire from heaven, or kindle a furnace seven times hotter than an ordinary anger would demand, for all who presume to question its infallibility; thus justifying the world in representing the odium theologicum as a concentration of

all that is fierce, vindictive, and destructive in the human heart."^{*} The depravity of the "human heart" is the inclination for evil insensibly naturalized in the heart of the child, those impressions of inert sin which grow up with their years into a state of active and baneful maturity. As a good education begins in infancy, so it is settled and perfected in childhood and youth; but is it the rigid discipline of human selfishness (miscalled piety) that will "train up a child in the way he should go?" On the contrary, *good* will be brought into a near and unfavourable comparison with evil, wearing the disguise and aspect of love.

What is taught with severity will be heard with pain, and thus a religion of love assumes an air of severity, begetting in the heart an habitual aversion to its presence; leaving the dissatisfied soul to be attracted by the novelties and delusions of sin. "Great severities do often work an effect quite contrary to that which was intended. And many times those who were bred up in a severe school hate learning ever after, for the sake of the cruelty that was used to force it upon them; and so likewise an endeavour to bring up children to piety and goodness by unreasonable strictness and rigour, does often beget in them a lasting disgust and prejudice against religion, and teaches, as Erasmus says, '*Virtutem simul odisse et nosse*,' to hate virtue at the same time that they teach them to know it. I insist upon this the more, because I do not remember to have observed more notorious instances of great miscarriage than in the children of very strict and severe parents."[†]

In contemplating the many and serious evils springing from a degraded and faulty education, hindering the hallowed operation of true religion, and obscuring the light of the church. What shall be said of the wisdom and justice of those of our legislators who are hostile to the general intelligence of the people, who procrastinate the moral amelioration of a nation; not merely indifferent, but actively opposed, to the spiritual and temporal improvement of a kingdom. Without a good and wise education, liberty is license and innovation destructive; without education the stability of law is insecure, and the nation is shook between the tyrannies of the rulers and the people. A good and universal education is so absolutely essential to the happiness and well-being of man, that without it not even the best-ordered and liberal government could long exist as such, but, from a natural expediency, must fall to a level

^{*} *Mammon*, p. 356.

[†] Tillotson, Sermon 58, p. 500.

with the national degradation. Thus the *remedial* plan is in constant and almost useless operation ; while the judgment hall and the courts of law are the moral pharmacopoliums of a corrupt and sinful people, Equity is merged in law, and law into a puzzle of expediency. Monopoly is the great national characteristic of Great Britain, not only of communities, but of individuals. The poor man labours for and at a monopoly ; the artizan, the mechanic, the shop-keeper, the merchant, the manufacturer, up to the professions, the bar, the senate, and the church, are all and each monopolies. The right of private judgment becomes the irritable and deceptive claim of every monopolist ; and thus private opinion, acting counter to a common consent, so retards reformation and checks inquiry that every new-sprung and accidental evil is prolonged into a habit. From this general and deadened apathy towards national and social abuses, the vocations of life, from the highest to the lowest, get contaminated with all that is vile and debasing to the soul ; dishonesty ascends through its modifying disguises of cunning, art, intrigue, skill, and dexterity, up to the admired virtues of ingenuity and worldly wisdom, to acquire which men aspire with an eagerness that makes trivial all the obstacles of sin. By a misapprehension of all final causes, mankind seem to act upon the principle of converting evil into good, insomuch that truth and charity are become over-dated virtues ; while in their stead the obsequious and pliable law of a conventional propriety is set up. But, knowing this to be the moral disposition of the higher and more affluent classes, how deep must be the moral dejection of the multitude ! with whom corruption grows corrupt, and sin engenders upon itself ; the mass and compaction of every vice. " If there be any among the common objects of hatred I doe contemne and laugh at, it is that great enemy of reason, virtue, and religion, the multitude, that numerous piece of monstrosity, which, taken asunder, seem men and the reasonable creatures of God, but, confused together, make but one great beast, and a monstrosity more prodigious than Hydra."⁴

Great is the criminality of those rulers, but greater is the guilt of a dominant christian church, in withholding the common blessing of a national education. A verdict has gone forth against them, even from the wisest and holiest of her ministers, whose prescient minds have prophesied of a better and universal education, and a purer faith. The multitude are bereaved of their moral sustenance,

• Religio Medici, p. 127-

creating a dearth and famine that has ended in all the excesses and debaucheries of this spiritual want.

The fashionable-dressed vices of the wealthier population now appear in their naked deformity; ingenuity and worldly wisdom are retroverted into bare-faced robbery and theft in a thousand forms; the polite circumventions of intrigue are turned into violence; and vices which, in the higher grades of society, appeared as comparative virtues, are denounced in the lower classes as crimes against religion and law. The statistical amount of crimes committed in this country is alarmingly greater than in any other nation; while the testimony of travellers exhibits a fearful odds in poverty, suffering, and crime.

If the government will not educate the people, bad circumstances, temptations and evil companions will educate them, for man cannot merely vegetate, either he will learn to do good or evil. In vain is the voice of religion and reason turned to the ear of a people morally deaf, in vain do the humane try to repel the tide of habituated evil; the remedies they propose are suitable but not adequate in power, and while individuals or parties may swell the list of converts, bad and depraved education is moulding and manufacturing a whole generation in the indulgence and practice of every vice. Amid the general bouleversement the rulers and governors of this kingdom are busied in court intrigues and senatorial squabbles; or in their utmost efforts stretch not beyond a municipal corporation bill, or the levying a new impost. Let them be assured, God who is in heaven judges them already, and hereafter will convict them of the sins and crimes of a people to which by their neglect of a good and wise and impartial national education they are accessories.*

* And it is pity that commonly more care is had, yea, and that among very wise men, to find out rather a cunning man for their horse than a cunning man for their children. *They say nay in word, but they do so in deed:* for to one they will gladly give a stipend of two hundred crowns by the year, and loth to offer to the other two hundred shillings. God, that sitteth in heaven, laugheth their choice to scorn, and rewardeth their liberality as it should; for he suffereth them to have tame and well-ordered horses, but wild and unfortunate children; and therefore, in the end, they find more pleasure in their horse than comfort in their children.—Roger Ascham's *Schoolmaster*, p. 206-7.

(To be continued.)

THE MUSICIAN ABOUT TOWN.

THE Italian Opera has advanced into the fourth month of its season without one single dramatic novelty having been presented to the subscribers. They have been led to expect the production of Rossini's "Guillaume Tell," but the reality is still in remote perspective. The "Lucrezia Borgia" of Donizetti is actually announced for Gris's benefit; but up to the present date (June 1st) it has been postponed. Mr. Laporte is a man of golden promise, but of leaden fulfilment—a line of conduct which we verily believe accords with the predilections of his aristocratic supporters; for Mr. Laporte is "wise in his generation." He knows that they doat upon being humbugged, because it is genteel, unmercantile. None but contractors and stock-jobbers, and such vulgar bores, insist upon the letter of their bond. How are the classes to be distinguished, but by opposite courses of conduct? The wily manager, therefore, makes florid protestations, and they trust he will be deliberate, and do nothing in a vulgar heat. He promises a world of novelty, and they murmur to him, in the Mandane strain,

"Forbear to fan the gentle flame,
Oh! let us be deceived!"

The appearance of Madlle. Pauline Garcia, younger sister of the eminent Malibran, has been to us, as well as to the discriminating portion of the musical public, a novelty of more than ordinary interest. She made her debut on the 9th of May, in the character of Desdemona, and would assuredly have produced a very lively sensation had not the public expectancy been over-excited by a preparatory running fire of mischievous puffs. We were advertised that we should hear a finer singer than her sister, and we found a timid, sensitive girl, between seventeen and eighteen years of age, with a voice (of course) not fully developed, but of rare and glorious pretension. It is of the same noble and weighty quality as her sister's, and, we conjecture, of the same surprising compass. In a musician-like composition, written for her by Costa, and introduced upon this occasion, she dwelt fully and firmly (if our memory be correct) upon *♯* below the line and the *o* in alt. Speaking from remote recollection of her sister, and with the immediate impression of Pauline's tones upon our mind, we should say that her voice is more equal

throughout than that of Malibran ; and in actual accomplishment she decidedly and greatly surpasses her *at the same age*. All this, in itself, is gratifying enough ; but for the confirmation of her being naturally a musical genius, we should rest upon the simple circumstance that we found ourselves perpetually recurring to her cordial tones, her spontaneous and unartificial expression, her noble, unmechanical delivery of her passages, and her sensible manner altogether. In short, if she realize the expectation of all the judges who have only partially witnessed her capabilities, she will at no distant period develop into a consummate artist.

Madlle. Pauline's second attempt in a new character, which was that of "*La Cenerentola*," on the 15th of June, thoroughly confirmed the estimate we had previously made of her talent, both natural and cultivated. Her embodying of the character we could scarcely pronounce to be the result of a lesson taught, studied, and learnt, though, at her age, such was doubtless the case to a certain extent ; for there were indescribable minutiae in manner, carriage, and general tone, which evinced the young actress of sound sense and developing genius ; while the quality of certain notes in either extremity of her compass, together with the runs of double octaves, which formed so dignified a feature in her sister's style, revived regretful thoughts of that eminent creature. In the former part of the character she was the injured, subdued outcast of her family ; and in the latter, the self-asserting, yet generous heroine of conscious rectitude and good fortune ; and each feature of the character was depicted without harshness of line, or ostentation of display. Her singing throughout was singularly fine for so young an artist ; the clever canone in the second act was encored, chiefly on account of the judicious manner in which she sustained her part in it ; and, indeed, we could not avoid drawing a comparison in this very movement between the beautifully subdued and genuine concerted singing of this girl of seventeen, and the uneasy display of Tamburini, whose "shivering, bob" notes, eternal roulades without meaning, and one cadence, denote the artist of undue success attributable to the strength of a fine vocal organ, rather than to slender accomplishments and still slenderer genius. The finale to "*La Cenerentola*," ("*Non piu mesta*") we have, of course, heard executed with greater force and executive finish, but never with more natural feeling and expression. Unlike almost all other singers, too, who stick themselves by the lamps, and give the audience to understand that they are about to present them with a notable piece of work, Madlle. Pauline every now and then addressed herself with an affectionate

gratitude to the prince, her lover, who had appreciated her character, and given the most signal proof in his power that he had done so.

On the 6th of June the "Lucretia Borgia" of Donizetti was performed, introducing to the subscribers the new tenor, Sig. Mario (his first appearance in public, here, was at the Philharmonic on the previous Monday, the 3rd). Dr. Johnson refused to accompany Mrs. Thrale in a ride to the country, saying "Madam, I hate green fields; when you have seen one green field you have seen every green field." Had the Doctor been invited to a modern Italian opera, and parodied this anomalous repugnance to green fields, his criticism would have been accurate, and his taste judicious; for of a truth, when you have heard one Italian opera of the last ten or twelve years' mint, you have heard every opera. The same character of melody constantly recurs; the same phrases, the same progressions, the same cadences. Donizetti's chief merit appears to us to lie in writing a simple and plaintive cavatina, of which we have some really pretty and graceful specimens; his instrumental accompaniments, also, are nicely and skilfully appointed. There are two of this class in the "Lucretia," one of which (if our recollection serve upon a single hearing) was transferred from the opera of "Il Furioso." These, and an agreeable trio, form the chief merits of the opera of "Lucretia Borgia." Indeed, to speak without prejudice (for we desire only refinement, *variety*, and food for thought) the whole of this opera is a "semper eadem" from beginning to end—nay, we might more justly say "semper pejorem," for each new production seems to get worse and worse as good composition is declining in Italy.* Let the vocal supply in Italy fail, and in what limbo would be registered the modern Italian opera?

Sig. Mario's voice is a high tenor, of sweet quality in the upper part of its compass; not very flexible: for this, however, we care little, for the rage for flexibility has sacrificed all just and grand expression. It is rather "*plummy*" in the middle and lower divisions, but is correctly in tune when not over-exerted. Its general character may be recognised when we designate it a plaintive or

* The following is the opinion of the *Morning Post* upon this opera, which, if not so intelligible as could be wished, is nevertheless amusing. "Some of our contemporary critics have rather overshadowed with their displeasure Donizetti's *Lucretia*. The deficiencies we see in it are a more CASTIGATO subject, and a few melodies wrought in relief upon the concerted pieces, such as satisfy the sybarite who likes to cull pleasure without effort of attention, as well as the dilettanti who live in the innermost penetralia of the mysteries of the musical fane." Fine writing, like "fair play, is a jewel."

grieving voice ; and therefore we should say that, although physically unequal to the high-flying, principal parts in the *great* style, he will always be estimable in those of the gently pathetic class.

An illustration of the first paragraph in the present article occurred on the night of Sig. Mario's debut ; showing the contemptuous insolence with which the frequenters of this theatre are treated by Mr. Laporte, who, throughout his management appears to have an equal scorn of that principle in moral geometry, that "the shortest distance between two given points is by a *direct* line." The bills of performance announced that between the first and second acts Madlle. Taglioni would dance a Polish dance, and after the second act a Russian dance, which would be succeeded by the ballet of "*La Gitana*." We had nothing but the ballet. No murmur—no apology. The plebs in the pit and gallery were inert, and the "genteels" were delighted—they were "deceived"—the distinction was accurately preserved between their house and that low-lived hole, Covent Garden, where the manager's word would have been disgustingly fulfilled to the last letter.

Covent Garden Theatre has again been the scene of a signal failure in the production of a new opera, adding one more confirmation of the desideratum we have so frequently insisted upon, viz. that in order to ensure success for an English opera, with an English audience, the drama itself must possess some interest in its plot, and some common sense and grammatical construction in its dialogue. What the character of an Italian *libretto* may be, is of little consequence ; it may triumph in absurdity, it may revel in dulness and balderdash ; the audience care nothing about the story, they require two or three arias, two or three duets, and a *tantara-ra-ra* of a finale to each act. If the piece contain one or two melodies of a popular character, it will prove *the* successful opera of the season. But the case is different at our national theatres. There the audience look for something like dramatic incident, with respectability (at all events) of diction. In both these important requisites, the machinery of Mr. Rooke's opera of "*Henrique, or the Love Pilgrim*," was deplorably deficient. The plot was so ingeniously involved as to defy all attempts at a solution of it : and the dialogue and versification so vapid as to demand some mastery over the faculties to knit them to the duty of attention. The consequence of all this was, that "*Henrique*" was performed for the first time on the 29th of April, and the last time on the 9th of May. It struggled through four or five nights, and then faded into the cold regions of oblivion. Mr. Rooke is in no other respect answerable for

the fatal issue of his opera than in a want of judgment in accepting such a piece as a vehicle for his music, which, if not of so popular a class as that in the "*Amelie*," contained nevertheless several movements distinguished by elegance and professor-like counterpoint. His melodies are uniformly graceful, and instrumented with the most accurate judgment of their distinctive characters. His accompaniments are never encumbered; and as he rarely employs the full orchestra but upon important occasions, the effect, by contrast, is considerably heightened, while the senses are agreeably relieved from that jaded feeling too often the result of sitting through a majority of the modern operas, wherein the whole band are kept upon active duty, as if the score were both written and played by contract—the largest supply of material for the least remuneration. The fate of Mr. Rooke's opera is sincerely to be regretted, both on his own account (for we believe the copyright remains unsold) and on that of the musical public; who, with even a commonplace incident and rational dialogue, would have carried the piece through triumphantly to the end of the season. As it was, the effect was almost as wearying (and this is saying much) as a stale jest-book.

With the new opera, the public were introduced to a new tenor, Mr. Harrison, a pupil of the Royal Academy, and latterly, as we have heard, of Mr. Rooke. The quality of Mr. Harrison's tone is of the average character, with perhaps more than the average power; but we cannot compliment either the singer or his tutors upon any accession being made in his person to the English vocal school. He is deficient in elevation of style, and, we should say, generally in intelligence of the art; in other words, he is commonplace and mechanical. The singer who pleased us most upon this occasion was Mr. Manvers. Appointed to an inferior station in the opera, he nevertheless had the good sense to study his music with additional care; and the consequence was, that no song received greater applause than one of a martial character allotted to him, and which he delivered with an energy and effect that none of his previous attempts had at all demonstrated, or led his hearers to anticipate.

Mr. Macready is said to have lost £600. by the failure of "*Henrique*;" and the truth of the report is probable, since it was produced at great cost of theatrical property, with expensive engagements. The wonder is, that with his experience in dramatic writing, he should have accepted such a piece; but if, as we have also heard, that he had advanced money to the composer before he had seen what he was to receive, he has paid the forfeit of his generous

indiscretion, and furnished a lesson to other managers not to trust the egotism or cupidity of composers, who appear to cling to the notion (in defiance of every year's experience) that any thing will serve to hang music upon—like a clothes-horse, or dummy, for displaying a fashionable ready-made coat.

After the failure of "Farinelli" at Drury Lane, and when the zoological curiosity of the public was satiated, the lessee made an experiment of giving shilling concerts, where strange vagaries were enacted both by performers and audience. As, however, Mr. Bunn did not include in the admission money a glass of rum and water and a segar for the purchaser of a ticket, he had no chance with the landlord of the Eagle Tavern, and was in consequence obliged to shut up his house. Since which event Miss Romer and Mr. Balfé have been sharing with the manager of the Surrey Theatre—and very successfully; for in one week we know, from the best authority, that the lady's profits amounted to more than £70. Before this number goes to press Mr. Braham will probably have joined the company, for he is announced as being engaged.

The Philharmonic Concerts, notwithstanding the unreasonable-ness of some of the subscribers, excited by the interested antipathy of a writer or two, whose services are no longer needed by the society, have gone on increasing in attraction to the close of the season. The directors have had difficulties and perplexities to encounter, which have made their task to provide a succession of novelty for the subscribers a most laborious one. They have been disappointed of a new symphony by Spohr; also of one by Schubert (the recommendation of Mendelssohn), which those *snail-waggon* Germans will have ready for performance about a fortnight after the season has closed. They have received two or three overtures strongly recommended to them, but which, upon trial, they could not bring forward. They would have engaged Duprez for four concerts, had his terms been a *little* more moderate than £500. *per night*. They could not engage Laporte's company; and had they been able to do so, the subscribers would have complained of the music those people would insist upon singing. When we had the Italians at the Philharmonic, it was the eternal cry, "Why do you not give us better music?" and when our native artists selected the most classical compositions, the subscribers groaned after "the flesh-pots of *Italy*!" The directors have done their best, and they have done well. Every singer, not within the influence of the opera manager, has been engaged; no instrumentalist of acknowledged reputation has visited us without having the means afforded him of dis-

playing his talent ; and the programme of each evening has been as judiciously selected as we believe the circumstances would admit. Where large resources are afforded, and no advantage is taken of them, we should be the foremost to stigmatize the neglect ; where these are cramped, and unlooked-for obstacles supervene, it is foolish as well as unjust to vituperate : but injustice and folly commonly go hand in hand.

At the second of these concerts the novelties of the evening were, a concerto pastorale" by Mr. Moscheles ; and the first appearance in this country of Herr David, of Leipsic, a distinguished violinist. The composition of Mr. Moscheles was pronounced by some of his hearers to be clever, although eccentric, with too strong a leaning to the conceited "Romantique school" of the French. Clever it undoubtedly is, for it contains striking effects, thoughtful writing, and masterly orchestral combination. If it be "eccentric," it is not necessarily "Romantique," seeing that it is not destitute of rationality or design. In their imaginative literature as well as in their music "young France" is meretriciously mad : no vagary is rejected that will induce observation—no principle worthless which makes its followers conspicuous. May the day be still remote that the countrymen of JOHN MILTON "shall need the Monsieurs of Paris to take our hopeful youth into their slight and prodigal custodies, and send them over back again transformed into mimics, apes, and kickahows."^{*}

Herr David is a pupil of Spohr, and brother to Mad. Dulcken. His tone is strong, firm, and pure ; his cantabile eloquent, his intonation exact, and his bowing grand and masterly. To all which excellent qualities may be added that he is a faultless timist. What with his manual accomplishment, and the composition he played, both of which stamp him a worthy disciple of so eminent a master, Herr David will leave behind him an honourable reputation when he quits our shores.

The fourth concert introduced to us a M.S. overture by Sterndale Bennett ("The Wood Nymphs"), an early composition, and indicating the future great musician : for although, with the prodigality incident to youth, the subject was too much attenuated, and the intention not sufficiently marked, yet the orchestral treatment and effects were masterly. Mr. Bennett, we understand, was not eighteen when he wrote this overture.

* *Treatise on Education.*

A Madlle. De Riviere, a vocalist of the French school, also made her first appearance upon this occasion. She possesses a clear, bell-like tone, and (speaking from recollection) a correct ear; but her delivery, and manner altogether, were unfeelingly mechanical and correct.

At this concert Herr David confirmed the opinion we entertained of his talent upon the previous evening. He sustained in a masterly manner the first violin in the fine ottetto of Spohr; the slow movement to which is one of the most lovely melodies, and most beautifully treated that ever came from the pen of the composer; and the finale to it, perhaps, one of his most original. An introduction and Russian air varied, performed by Herr David in the second act, although bearing throughout the impress of a good musician, was nevertheless inferior in point of merit to his first composition. The constant repetition of these "airs variés" may possibly dispose us to contemplate them with a half indifference.

At the fifth concert young Bennett played his piano forte concerto in *r* minor; a work upon which we have heretofore dwelt with considerable satisfaction. This was its first performance at the Philharmonic. In the second act we were introduced to a young violoncellist, Mons. Batta, a Belgian of high reputation on the continent. For strength and richness of tone we have, and we know no higher standard than those of Mr. Lindley. None of the solo players from abroad, that we have heard of late years, are able to compete with our countryman upon this point; and the reason appears to be, that since the object in modern violoncello playing is to sacrifice body and quality of tone to execution, this is accomplished by using strings of less diameter; for it would be miraculous that any player should execute the same passages we heard from Mons. Batta's instrument with Lindley's bow and strings. The result, therefore, is, that we have a thin tone, too nearly approaching to that of a viola, with extraordinary execution: and upon this point, with the mastery of his bowing, we accord to Mons. Batta unqualified applause. They who are contented with what Lindley can accomplish upon his instrument (and it cannot be denied that it is sufficient for every purpose short of *extravagant* execution), will compound for legerdemain, that they may possess the rich and *legitimate* tone of the violoncello.

A Madlle. Lewig, pupil of the late Ferdinand Ries, performed a concerto of her master's at the sixth concert. The young lady is a showy player, but an indifferent timist. Having already had a

was no judicious friend, who, having heard what she could do, recommended her being engaged.

Herr Hauman, a disciple (and worthy one) in the Paganini school, played in the second act. With a pardonable foppery, the pupils of Rubens used to imitate the dress of their master, and fashion of his beard. The general air and manner of M. Hauman is precisely that of *his* great prototype; he however possesses qualities in his art which redeem the less creditable condescension of becoming a mimic, where there is abundance of real talent to establish a fame for himself. M. Hauman has an absolute command of his instrument. His manner of covering the finger-board is very like Paganini; and (like Paganini) he appears to be prepared by nature for reaching great distances with but little shifting of the hand. He therefore darts with admirable certainty from the lowest notes of his violin to the "ultima thule" of its compass upwards. His bowing is masterly and grand; and his performance of double stops, and staccato passages quite extraordinary. In the last movement of his concerto he introduced a variation in staccato, which we believe no one but Paganini could play like him:—in short, after the eminent Italian, he is the greatest accomplisher of difficulties that we have heard.

A rival to him of the French school, a Mons. Artot, performed a fantasia at the seventh concert. With too great a display of what our neighbours denominate "intense feeling and expression," so that the whole of his adagio movement was a succession of slides and tremors, with scarce a firmly held note, Mons. Artot is nevertheless a very refined and accomplished artist. The concluding variation to *his* fantasia was also one of excessive difficulty, and he executed it with exquisite neatness and certainty.

At this and the previous concert the public first heard the new singer, Mad. Dorus Gras. As this is distinctly the *mechanical* era in music, and that it has attained to a degree of florid perfection which all but completes the circle, we may hope for an early change of fashion and manner; and, indeed, it is to be confidently expected when we consider how soon every novelty in Paris is "*deja vieux*," and how prone the genteel million here are to adopt every suggestion that is French. Mad. Dorus is perhaps the most expert, the most accomplished, executer of solfeggi passages now living. Her distances are taken with unerring certainty, her divisions are run with the quickness and volubility (though not with the melting quality) of the nightingale; her chromatic passages, *up* as well as

down the scale (and the difference in respect of difficulty every artist knows) are singularly accurate. Here, however, our admiration of the singer ceases. Her quality of voice is hard, loud, and unfeeling; for we do not call the sudden suppression of tone, and the yearning forward of the head, a genuine display of feeling and expression. Loudness and softness are, in themselves, no indication of feeling—it is in the *tone*, which goes at once to “Love’s throne,” and can no more be described than the “fleeting air.” Moreover, Mad. Dorus sings exquisite stuff; and this of itself argues little for her musical feeling. At her first appearance she sang a solo from the “Cheval de Bronze,” about the “torment of widowhood,” wherein the music and the words are worthy of each other; and the latter are an epitome of the execrable French morality. The composition, however, contains some very difficult solfeggi passages, and these she undoubtedly executed to the admiration of all who estimate a surprising dexterity.

The selections at the “Ancient Concerts” this season have manifested a decided improvement. Many unworthily neglected compositions of the old masters have been reproduced, to the satisfaction, as we hear, of all the lovers of sterling ancient music. Much of the merit for these restorations is said to be awarded to the superintending zeal and good taste of Lord Burghersh.

The activity of the directors of the “Società Armonica,” in engaging the most eminent foreign artists, who, with the Swallows, take advantage of our summer season; together with their zealous endeavours to promote the cause of classical music, entitle them to good report; and, as a consequence of it, have secured them, as we are informed, a full subscription.

The last performance at Exeter Hall, which took place on the 7th of June, consisted of the “Dettingen te Deum,” a short miscellaneous selection, and Haydn’s First Mass. It was to us an evening of almost unalloyed extacy. The last work has probably never before been performed by so large an orchestra; and, taken altogether, most probably never with finer precision. The effect of the choruses was transcendently fine, especially of the magnificent fugue at the end of the “Gloria.” The trebles and basses are the best of this vocal orchestra; the altos are rather shrieky, and the tenors apt to be out of tune. Altogether, however, we have no musical entertainment like these performances, and certainly none so calculated to refine and confirm the national taste for the grandest and most perfect of all composition—that of the stupendous choral fugue.

The solo singers upon the present occasion were, Miss Wyndham, Miss Cawthorn, Messrs, Bennett, Young, and H. Phillips. The soli movements in the mass were not equally satisfactory ; and with truth, although with regret we say it, they were injured by the intractable violence of the second lady just named. So overpowering were her tones, that the several movements were solos for Miss Cawthorn, accompanied by the other singers.

We witnessed with pleasure the fulfilling of one suggestion in our last report of this society, by the engagement of Sig. Dragonetti. This circumstance induces us to hope that the committee will not lose sight of another thrown out about a year ago, viz. that in their miscellaneous performances they will introduce some of our national choral anthems ; above all, for an audience like that at Exeter Hall, where *effect* naturally makes the strongest appeal, that famous anthem of Dr. Blow, " I was in the spirit." Phillips's fine declamatory style will tell admirably in the solos, and these responded by the " Hallelujahs" (piano and pianissimo), of the heavenly host, can scarcely fail to produce a strong impression upon the audience. The present article will have gone to press before the next revival will have taken place, which will be the oratorio of " Joshua."

The benefit concerts have been very numerous, but, we hear, not equally remunerating this season. The most interesting that we attended were, Sig. Benedict's, on account of his rich assemblage of vocal talent, for he was assisted by almost every artist of repute, foreign and native, in the country ; and Mr. Cipriani Potter's, which, for the instrumental division of his programme, was precisely the concert which should be given by the principal of the Royal Academy. This consisted of his own excellent symphony in *a flat*, and the Pastoral Symphony of Beethoven. Mr. Potter himself performed Mendelssohn's second pianoforte concerto ; a Prelude and Fugue of Sebastian Bach with Dragonetti, who played the pedale part ; and some very clever Bravura variations from a theme in his own dramatic composition of " Coradino." Herr David also performed a solo ; and the overture to " Der Freischütz" closed the concert. Mr. Potter, we think, never played in a more masterly manner than upon the present occasion, the more surprising from his having added to his fatigue and anxiety the arduous duty of conducting a three hours' performance.

We notice, by a paragraph in one of the Worcester papers, that the directors of the approaching festival have handsomely considered the suggestion we threw out at the close of the last festival season, with regard to the erection of seats at such prices as to enable the

humbler citizens and tradespeople to partake of the performances. We have little doubt that the committee will, on every account, congratulate the result of their extended plan of accommodation. Miss Clara Novello is engaged to make her first public appearance upon her return to England at the Worcester Festival, which will commence on the 10th of September.

THE MUSICIAN OUT OF TOWN.

THE following is a brief report of the late Düsseldorf Festival, and which we happily were enabled to attend. Mendelssohn was conductor, and the first morning's performance (19th of May) consisted of the "Messiah," the first time for twenty years since it has been given at any of the Rhine festivals. The chorusses, taken altogether, were very good, especially the trebles and basses. The effect of *female* voices in the *altos* is not so powerful and piercing as when that part is taken by men, but it is more agreeable. The band, generally speaking, wanted unity; but this is to be accounted for by its being formed of amateurs as well as professors, who all assemble from adjacent districts.

We have heretofore spoken of Mendelssohn as a conductor. His exertions upon the present occasion were gigantic. At the rehearsal his unwearied patience, his vast orchestral knowledge, his playful, yet firm and persuasive manners, were all conspicuous. He harangued the band with admirable tact and humour, making them shout with laughter and applause. On one occasion he told them, in some piano passage, that doubtless each was anxious to hear his own individual voice or instrument, and he was prepared to acknowledge that it was very fine; but that if they would each endeavour to listen to their neighbours' beautiful execution, they would proportionately soften their own, and this would produce exactly the *piano* effect he wanted in that particular passage. Upon another occasion he requested some ambitious performer to alter his style, which too closely resembled the tone of a cat scratching a silk gown. Another time, with an amiable playfulness, he said, "Gentlemen, am I never to hear that passage again as charmingly done as you did it yesterday?" and in this way he lightened the toil of a strenuous rehearsal. He must have been gratified with the honours he received, although, like all true geniuses, he is so modest as rather to shrink from applause. On

the second evening, a bouquet of choice flowers was placed between the leaves of his score on his desk.

The principal singers were—*sopranos*, Miss Clara Novello, and Madlle. Fassman, from the opera at Berlin; *alto*, Madlle. Schloss, from Cologne; *tenor*, Herr Schmidt, from Leipsig, who undertook the songs at a very short notice, in consequence of Herr Schmetzer, from Brunswick (who was engaged as tenor) being prevented from attending by his other engagements; and the *bass*, Herr Hinze, from Düsseldorf.

The chorus was chiefly composed of amateurs; and it was pleasant to recognise amidst them some of the most celebrated painters of Germany, among others, Hildebrandt, Schirmer, &c. Every rehearsal, which was crowded, may be said to have been a rehearsal to both audience and performers, since it enabled them to become acquainted with this grand music, and which requires thoroughly knowing to appreciate; and, from not having been performed for so many years, it must have been quite new to a large proportion of the hearers.

The opening recitative, "Comfort ye," was but an indifferent performance in our judgment, who had so vivid a recollection of Braham in the same piece. The bass singer, also, was somewhat out of tune in "But who may abide," but he afterwards improved. "He shall purify," "For unto us," and "His yoke is easy," were sung as both *quartet* and chorus; and not so those which are always taken in that manner in England—"Their sound is gone out," and "Lift up your heads." We do not, however, like the effect so well, especially in the "For unto us," where its majesty of character is totally destroyed. The alto was rather tame in "O thou that tellest," and the bass recitative and air, "The people that walked in darkness," was taken a thought too fast. "There were shepherds" was charmingly sung; as also "Rejoice greatly," which in Germany is usually taken by the tenor: but the triumph of Miss Clara Novello's singing was the "I know that my Redeemer," and which was so great a favourite at the court of Berlin that, whatever may have been performed in the course of the evening, the crown prince always demanded that air of the singer. "He shall feed" is performed in four alternate passages, and not two, as in England. We do not like the effect of it. Madlle. Schloss's best song was "He was despised," but her style is unfinished. Madlle. Fassmann sang "Behold and see," and "Thou didst not leave." This is the artist so celebrated for her performance in Gluck's operas. She was engaged from Berlin

expressly for the Düsseldorf Festival, and was to have had the "Alceste" got up on the third day for her; but, owing to the non-arrival of the music, the plan was relinquished, much to our regret, as we would fain have heard this singer in her own peculiar style. She is a remarkably fine woman, with delicate features, and a profusion of hair, which she wears in long curls dropping down her cheeks.

The choruses best performed were, "Worthy is the Lamb," the "Hallelujah," and "All we like sheep;" but, partiality out of the question, the vocal band were not equal to that at Exeter Hall for union, energy, and precision.

Second Performance.—Evening. The Symphonia Eroica of Beethoven opened the concert. In the first movement the violoncellos were not sufficiently powerful. There was a want of finish in the sudden pianos; and the passages of delicacy were deficient in brilliancy. Moreover, the violins wanted clearness; and the slow movement was deficient in smoothness and *singing* in the instruments. The minuet went remarkably well; but the passage for wind instruments in the trio as badly as that passage almost uniformly does. The finale, which was lamentably indistinct, was the worst executed of all the movements.

Beethoven's mass in c, which succeeded, was nicely performed; the choruses stole in with a delightful piano in the "Kyrie;" but it is needless to say that Herr Julius Rietz, who was conductor upon this occasion, is not a Mendelssohn. As a composer too, he is not to our taste: an overture of his, which came after the Beethoven's mass was tremendously noisy, with running passages for the brass instruments. The subject of the second movement, the allegro, was an imitation of Spohr. Then came Mendelssohn's glorious psalm "As pants the hart," excellently performed as regards the choruses; but this school of music is so totally out of Fassman's style, that in our opinion she completely spoiled it. It was on the third evening that we heard this celebrated singer to advantage. The first notes she uttered of Mozart's fine duet, "Fuggi crudele," showed us at once that the *dramatic*, and not the *sacred*, is her forte. She afterwards sang a recitative and air from Gluck's "Iphigenia," which is considered as her greatest effort; and undoubtedly she delivers it with effective dignity; and had she a better quality of voice, which is somewhat reedy, and wholly without flexibility, she would have rendered complete justice to this admirable composition.

Upon this occasion too, Clara Novello's varied powers were more fully developed to the people of Düsseldorf; as at the same concert

she sang Haydn's "With verdure"—all purity and poetical description; Bellini's "Casta Diva"—full of noble self-assertion, indignant remonstrance, and fluctuating passion; and the national airs of "Bonnie Prince Charlie" (this song was given at the desire of Prince Frederick of Prussia, who honoured the festival with his presence) and "God save the Queen;" which last, when vehemently encored, she sang in German.

We had the delight of hearing Mendelssohn play his celebrated concerto in D minor—the one which he composed for the Birmingham festival in 1837; and it is with no disparagement to the three eminent professors whom we have heard play this piece in England, viz: Mrs. Anderson, Mad. Dulcken, and Mr. Moscheles, when we say, that it is only its composer who can render it full justice. His touch is quite perfect: the utmost delicacy and polish are combined with an equal vigour, clearness, and precision.

On the Tuesday and Wednesday there were races given, at which the Prince Frederick, the Prince of Strelitz, and the whole of the court were present. On the latter day the Prince gave a dinner to the whole of the artists who had contributed so much to the public gratification; and in the evening there was a ball prepared in the concert room for the towns people, at which the royal party appeared for a short time.

The orchestra upon this occasion consisted of 126 sopranos; 62 altos; 106 tenors; 134 basses, making 428 voices. The instrumentalists were, 67 violins; 22 violas; 22 violoncellos; 12 double basses; 6 flutes; 4 oboes; 4 clarinets; 4 bassoons; 1 ophicleide; 4 horns; 4 trumpets; 1 bass trumpet, and 4 trombones: 155 instruments, which, with the 2 conductors, and chorus masters comprised an orchestra of 586 performers.

AN HISTORICAL SKETCH OF FRENCH LITERATURE.

V.—ON THE LOVE-SONGS OF THE TROUBADOURS.

" He saide hee loved, and was beloved nothing ;
Of swich matere, made hee many layes,
Songes, complaintes, roundels, virelayes ;
How that he durst not his sorwe telle,
But languisheth as dothe a furie in helle ;
And die he must, he said, as did Ecco
For Narcissus, that durst not tell here woe."

CHAUCER, *Frankelins Tale*.

VARIED as are the productions of the Provençal bards, the most exalted and conspicuous station in their poësy must undoubtedly be assigned to their love songs. The influence of woman, which, under their Roman conquerors, they had slighted and disowned, was now, under their Gothic rulers, acknowledged in its most despotic shape. Love, as an idol, reigned supreme, and before his shrine were freely lavished those feelings of reverence and of veneration which ought to be excited only by the contemplation of an Heavenly One. Despite, however, this impassioned and ill-directed fervour, despite the laxity of morals which so peculiarly distinguished the age, it must be allowed that these outpourings of uncultivated genius were of unquestionable utility in an age of darkness and of oppression, when the superior trampled with despotic violence on the inferior, when feudalism was dominant, and when a long-continued system of servitude had degraded and brutalized mankind. The joyous strains of the Troubadours naturally elicited corresponding feelings of tenderness and love, and thus, arousing man's mental faculties from the degrading lethargy in which they had so long and so inertly slumbered, awakened him to a sense of his innate might, inspired him with new wants and new affections, evinced the value of social enjoyments and relations, and finally, by leading him from the dark and lowering aspect of the present, to the bright and airy vistas of the future, demonstrated the benefits of mental refinement and cultivation.

The love poems of the Provençals, though they present a profusion, possess but little real sentiment. It has also, with some show of justice, been objected to these compositions, that they are replete with the same ideas, that the same images and the same metaphors

are continually recurring, and that the poetry, which of all others should be the most glowing and impassioned, is, with few exceptions, the most insipid and the most heartless. This objection, however, must be not a little qualified, when we reflect that it must apply to all poetry of sentiment: without any incidents to keep the attention from flagging, this class of poetry is to be enjoyed only when the mind is in a fit mood, and then only by morsels. If perused in this manner, few will deny that in many, at least, of the Provençal love songs, the tenderness and purity of passion are exquisitely described; while in others the gracefulness of the style, combined with the regular return of the metre, present a charm which, though fully sensible of its influence, we find it difficult to account for.

In history in general, but more particularly in that of literature, there are few more important errors committed than by the inconsiderate use of general theories and views; their great misfortune being, that what may be true of literature, or history as a whole, is frequently totally false as to some of the parts of which it is composed. This false criticism is nowhere more plainly seen than in the branch of Provençal literature which we are now discussing, in the consideration of which there are two opposing parties, the one headed by the Schlegels, Raynouard, and the French critics; the other led by Dunlop, Hallam,* and the generality of our English writers. The opinions of both parties are generally expressed without any limitations, the first affirming that the amatory productions of the Troubadours are exquisitely graceful, and tender, and fervid, and beauteous; the second fulminating their anathemas, and decrying them as incongruous, insipid, valueless, and obscene. Both parties are *partially* correct; for it must be confessed that in many of these poems the boundary of devotional propriety is wantonly overstepped, the language of passion too frequently degenerates into the ungovernable ebullitions of lust, and the praises of true chivalry and honour give place to those of inconstancy and libertinism. These effusions it is which render so revolting, so monotonous, and so in-

* See Dunlop's *History of Fiction*, vol. ii., p. 184; he there says that the compositions of the Provençals "contain violent satires against the clergy, absurd didactic poems, moral songs versified from Boethius, and insipid pastorals." Hallam, also, (vol. iii., p. 541, 8vo. edit.) speaking of these bards, says, "These were the celebrated Troubadours whose fame depends far less on their positive excellence than on the darkness of the preceding ages, on the temporary sensation they excited, and on their permanent influence on the state of European poetry."

apid, the poetry of the Provençals ; and happy had it been for that poetry if this portion at least had been lost in the wreck of ages ; the remaining fragments would, like the sacred leaves of the Sybil, have increased in value by diminution in number, and Posterity would gladly have received from Time the gift, two-thirds of which he had consigned to a well-merited Oblivion.

If, however, we peruse these productions with a more attentive and less jealous eye, we cannot deny to some few at least the honourable meed of a well-deserved praise. Some of their fugitive pieces are perfect in their kind, and possess a sensibility altogether intellectual, and a passion as fervent as it is pure. Some of their most pleasing productions are those where we find the sturdy warrior, the knight that mocks at steel and thirsts for danger, sinking before the eye of beauty into the gentle, tender, and submissive lover. These productions breathe a strange combination of amorous and chivalrous feelings ; the inborn sympathies of the heart are seldom extinguished : and from the scenes of slaughter and desolation the knight gladly turned to the eye of compassion, and with a heart untainted with bloodshed chaunts alike the loveliness of his mistress and the prowess of his arm.

Exquisite, however, as are some of these amatory productions, it must be confessed that love, as a passion, is too generally misconceived, and addresses itself rather to the head than to the hearts of its hearers. The passion which inspired the Troubadour was essentially artificial, and emanated more frequently from the advantages of present convenience than from any actual passion. This artificial tendency arose, in part at least, from the spirit of chivalry itself—a spirit which, at first sight, would seem to authorise a very opposite conclusion. Chivalry, though it extended the *apparent*, curtailed the *real*, influence of love ; for by erecting it into a regular system, it degenerated from a generous impulse into a frivolous passion, till at length the knight selected a mistress not from any principle of love, not from any glowings of enthusiasm, but as a proper and indispensable appendage to his knighthood ; an object of devotion, to whom he might dedicate his effusions, and desecrate the name of love by giving it to the heartless connection. Chivalry gave scope to many virtues, but it often fostered gigantic vices and sheltered innumerable crimes ; and though we may believe that the days of its dominion were as we wish them to have been, though we may fancy that all the ladies were lovely and chaste, and all the knights gentle and brave, we cannot but know that thoughts like these are but the day-dreams of the mind, and that

though the splendour of feudal pomp and magnificence may tend to gloss, they never can hide its real deformity. Wretched in its general jurisprudence, it is nowhere seen to greater disadvantage than in its misconception of love; the tender passion was laid aside for heartlessness, or used only for intrigue and grossness and immorality.

Though many, however, of the Troubadours were thus insensible to the tender passion, it cannot be denied that others, again, were equally susceptible. Thus, Guillaume de la Tour could not survive his mistress;* Guillaume d'Adhemar died for love; and Pierre Rogiers and Richard Barbesieux† turned hermits. Pierre Vidal, however, stands deservedly in the first rank for genius, extravagance, and absurdity. In harmony of metre and in elegance of expression this poet far excelled all his contemporaries; his talents, however, were alloyed with a most unfortunate propensity to fall in love with every fair dame whom he saw; and whom his inordinate vanity led him to believe loved him in return. His indiscreet boasting caused one indignant husband to pierce his tongue with a hot iron. This, however, had no effect in cooling his passion; for very shortly afterwards he succeeded in stealing a kiss from Adalasia, the wife of his patron, Barral de Baux; for this dire offence the amorous knight was obliged to flee to Geneva, whence he proceeded, as a crusader, to the Holy Land. Here he again fell in love with a plebeian Grecian woman, who was palmed upon him by the nobles as the niece of the Emperor of the East. Overjoyed at his lucky marriage, he immediately assumed the imperial title, had a throne erected, and was only deterred from further folly by the exhaustion of his finances. His enemy Barral being now dead, Vidal returned to Europe, and, renouncing his attachment to Adalasia, was attracted by the charms of *Louve de Genautier*. In honour of this fair lady he suffered himself to be called *Loup*; and, by way of still

* Millot, *Hist. Lit.*, &c., tom. i., p. 147.

† This poet was enamoured of the fair daughter of Geoffroi Rudelle; but having cause to doubt the fidelity of his mistress, he secluded himself for the space of two years—

“*Miels de donna que fugit ai dos ana.*”

He then returned to his mistress, but having still cause for dissatisfaction he resolved to “*vivre comme un reclus, comme un ours.*” He then went to Spain, where he secluded himself, and died “*e lai visquet, e lai mort.*”—Raynouard, *Choir des Poésies*, tom. v., p. 433; *Hist. Litt. de France*, tom. xix., p. 536.

more ostensibly demonstrating his passion, attired himself in a wolf's skin, and allowed himself to be hunted by shepherds and dogs in the mountains of Cabaret. This act of insanity, however, nearly cost him his life; for the dogs, having caught him, wounded him so dangerously that he was carried for dead into the house of his beloved *Louve*, whose husband (the lord of Cabaret) engaging a physician, shortly effected a cure.*

The fates of Geoffroi Rudel are more tragical and mournful than those of Pierre Vidal. In a voyage to the Holy Land he fell violently in love with the Countess of Tripoli, whom he had never seen. He addressed several poems to her, and finally, unable any longer to curb his strange passion, embarked for Africa. During the passage, however, he fell sick, and arrived at Tripoli in so enfeebled a state, as not to be able to leave the vessel. In this lamentable condition he sent to inform the princess of his situation, and besought her to give him some token of her regard. Touched with the recital of his strange passion, the princess personally visited him on board the vessel where he lay. This unexpected mark of condescension was too great for the already exhausted Geoffroi to support, and in a frenzy of love and gratitude the warrior poet expired at her feet. The awful sight so agonized the lovely Countess that she immediately renounced all worldly enjoyments, and, secluding herself in a convent, devoted herself to an eternal celibacy. The remains of Geoffroi were buried with the greatest pomp; and a splendid tomb of porphyry attested to future generations the too fervent passion of the hapless Troubadour.†

The numerous forms of composition, which were either adopted, or invented in the amatory effusions of the Provençals, are almost incredible; each poet appears to have framed some peculiar mode of versification by which to denote his passion. To give a list of the names of all these compositions would afford but little amusement, we shall therefore restrict ourselves to a few of the more important; referring our readers for the other ones, to the valuable collections of Raynouard. The *Albas* and *Serenas*‡ were stanzas sung by the poets at the break or close of day in honour of their mistresses; these compositions among which may be ranked some of their most

* Diez, *Geschichte und Werke der Troubadours*.

† Pasquier, *Recherches de la France*; Millot, *Hist. Litt. des Troub.*, tom. i., p. 85.

‡ *Alba* in Provençal signifies "day-break;" *Serena* is derived from *Sera*, signifying "evening."

pleasing productions, bear a strong resemblance to the watch-songs* of the German Minnesingers. The *chansons, sons, sonnettes* and *ron-dast*, were a few of the principal forms in which the poet was wont to clothe his passion or to record his sufferings. Perhaps, however, the most pleasing of these poems are the *planks* or songs composed on the death of a mistress; they are in general extremely captivating alike from the style in which they are narrated—from the tenderness and pathos which their occasion naturally calls forth—from the venerable simplicity of their language—and from the melancholy beauty of the prolonged metre, which, by embalming them in melody, gives an air of richness and of beauty to compositions in themselves insipid.

* In the *wachterleider* as in the *albas* the poets evince their skill in narrative composition. They commence generally with a parley between the love-struck knight and the “ladie” of his love. The stolen interview is also generally interrupted by the approach of the sentinel of the castle; who warns the lovers that morning is approaching, and commands them to separate. Perhaps the best of these compositions is the celebrated one by Marcabrun, commencing

“En un vergier, sotz fuelha d'albespi,
Teuc la dompna son amic costa si
Tro la gaya crida que l'alba vi
Oy dieus ! Oy dieus ! de l'alba tan tost re.”

The original is given in Raynouard, tom. iii., p. 375, and a German translation will be found in Diez, p. 168.

† The *ronda* (*cansón redonda*) bears a stronger resemblance to the fopperies and *Nugas difficiles* of the scholastics, than to the extemporaneous productions of the Provençals. Its requisites were, that the last line of the first should rhyme with the first of the second strophe; and the first line of the first with the last of the second. The accompanying list of the rhymes of a poem of this description, by Giraut Riquier, may suffice as a specimen.

FIRST STROPHE.

clamans
estraise
dans
comjaire
chans
sabens
contradire
vens
dezire
jauzens.

SECOND STROPHE.

jauzens
cossire
valens
sospire
mens
afans
aire
enans
gaire
mans.

This poem has been transcribed by Diez, and published in his *Geschichte der Troubadours*, from a manuscript in the Royal Library at Paris, entitled “*Cans on redonda et encadenada de mots e de son.*”

The picture of Provençal love-song presents, as must every other, a bright and a repulsive side ; the one as much to be cherished and praised, as is the other to be deprecated. Despite, however, its licentiousness, and it is great ; despite its immoral allusions, and they are not a few ; despite the chilling objections which critics have delighted to heap upon it, the amatory poetry of the Troubadours presents to the student an inexhaustable fund of instruction and delight. Emboldened by a common sentiment—urged on by the same cause—the Troubadours presented an irresistible phalanx to the further encroachments of barbarism ; and the briefest survey of the state of society before their advent and after their fall, will authorize us in hailing their existence, as a brilliant triumph in the great cause of man. In our joy at the impulse which their sentiments of love imparted to mankind, we can overlook the excesses into which it hurried them ; and we can bear in mind that its evil influence was soon remedied, but that the good has never ceased. In a word the passion of the Troubadours, licentious and ungoverned as it was, first imparted to modern Europe the breath of intellectual life ; first displayed the harmonizing and irresistible effects of its cultivation ; and first presented the master key, with which to unlock the fetters which for more than ten centuries had restrained the mind. Nor was this all-powerful engine to be resisted ; before its influence man's chains were destined to drop off, and he himself to proceed exulting in the glorious track of honour, and liberty, and glory, and power. The tide of mental cultivation, once aroused, flowed on with rapid and increasing steps ; the gentle stream which had been aroused by the Troubadours, was, by their successors, transformed into the boiling torrent, which, still dashing onwards, spurned every obstacle, and hurried the barrier and its builder to the same destruction. The mind was thus irresistibly impelled to improvement, and uniting refinement to gallantry, burst forth, as does the sun from the clouds, which have for a time obscured him in a dazzling galaxy of brilliancy, excellence, and power.

CRITES.

(To be continued.)

CRITICAL NOTICES OF NEW PUBLICATIONS.

*Account of the Voiage and Travaile of Sir John Maundeville, Knyghte.**

SIR JOHN MAUNDEVILLE was one of those chivalrous characters who overpassed, even in a romantic age, the common bounds of enterprize in quest of adventure or experience. He manifestly possessed an extraordinary mental constitution, and its prominent features appear on every page of his Itinerary. His spirit was ardent, credulous, enthusiastic. A concise but interesting notice of his Life, including remarks on his communications, is prefixed to this valuable and well-executed Reprint of his "Voiage and Travaile" by his editors. He was born at St. Alban's about the beginning of the fourteenth century; and, after completing a liberal education in literature, languages, philosophy and physic, he set out on his travels from which he did not return till after the long period of thirty-four years. Towards the end of his active life, he went to Liege where he died in the year 1371: he was buried there in the "Abbie of the Order of the Guelielmites," and a monument with a descriptive epitaph was erected in that church to the memory of our celebrated countryman.

Scholars, collectors and other lovers of ancient Book-lore, owe a large amount of gratitude to Mr. Lumley, the intelligent and very spirited Publisher of Sir John Maundeville's extraordinary production. For more than a century the editions of 1725 and 1727 were the most esteemed of all others in the English language; but thanks to modern enterprize here so happily exemplified, the present Reprint excels its predecessors, in the distinctness of its typography, and in the number and beauty of its graphic illustrations. We too have sincere pleasure in acknowledging our extreme obligation to the same liberal Biblioplist for the use of those wood-cuts by which the importance of this article is essentially enhanced.

Sir John Maundeville enters on his curious narrative with a "Prologue," wherein he enumerates the objects of his various peregrinations, and specifies the design for which the history of his "travailes" was compiled. In the vernacular language of our ancestors, in the thirteenth and fourteenth centuries, he states that

* *The Voiage and Travaile of Sir John Maundeville, Knt. which treateth of the Way to Hierusalem; and of marvayles of Ynde, with other Lands and Countreys*: reprinted from the edition of A.D. 1725; with an introduction, additional notes, and a glossary, by J. O. Halliwell, Esq. F.S.A. F.R.A.S.; pp. xii, 325, London, 1839: published by Edward Lumley, 56, Chancery Lane, with a Frontispiece, title-vignette, and seventy fac-similes of the ancient wood-cuts.

"For als moche as it is longe tyme passed that there was no generale Passage ne Vyage over the See; and many Men desiren for to here speke of the holy Lond, and han thereof gret solace and comfort; I John Maundevylle, Knyght, alle be it I be not worthi, that was born in Englund, in the Town of Seynt Albones, passed the See, in the Zeer of our Lord Jesu Crist mcccxxii, in the Day of Seynt Michelle: and hidre to have ben longe tyme over the See, and have seyn and gon thorghe manye diverse Londes, and many Provynces and Kingdomes and Iles, and have passed thorghe Tartarye, Percy, Ermony, the litylle and the grete; thorghe Lybye, Caldee, and a gret partie of Ethiope; thorghe Amazoyne, Inde the lasse and the more, a gret partie; and thorghe out manye othere Iles that ben abouten Inde, where dwellen many dyverse Folkes, and of dyverse Maneres and Lawes, and of dyverse Schappes of Men. Of whiche Londes and Iles, I schalle speke more playnly hereafre. And I schalle devise zou sum partie of thinges that there ben, whan time schalle ben, afre it may best come to my minde; and specyally for hem that wyll and are in purpos for to visit the Holy Citee of Jerusalem and the holy Places that are thereabout. And I schalle telle the Weye that thei schulle holden thidre. For I have often tymes passed and ryden the way, with gode Companye of many Lordes: God be thonked. And zee schulle undirstonde, that I have put this Boke out of Latyn into Frensche, and translated it azen out of Frenche into Englyssche, that every man of my Nacioun may undirstonde it. But Lordes and knyghtes and othere noble and worthi Men that conne Latyn but litylle, and have been bezonde the See, knowen and undirstonden, zif I erre in devisynge, for forzetyng, or elles; that thei mowe redresse it and amende it. For thinges passed out of longe tyme from a Mannes mynde or from his syght, turnen sone into forzetyng: Because that Mynde of Man ne may not ben comprehended ne withholden, for the Freelte of Mankynde."

With the enthusiasm and devotion of an unsophisticated papist, Sir John proceeds to "teche zou the Weye out of Englund to Costantinoble," and his itinerary is sufficiently precise, if not entertaining; it finishes with an account of the "Ymage of Justynyan the Empeour," accompanied with a lively graphic illustration. The traveler's next theme is "the Crosse and the Croune of oure Lord Jesu Crist, and his Cote withouten Semes, and the Spounge, and the Reed, of the which the Jewes zaven our Lord Eyselle and Galle;" and, on each of these venerable articles, he discourses with pathetic and circumstantial eloquence. His description of "the Cytee of Costantinoble and of the Feithe of the Grekis," evinces the closeness of his observation, and the extent of his acquaintance with the practices of the Greek church. He allows that "Men of Grece ben Cristene, zit they varien from oure Feithe;" and for this distinction, he adduces very copious and abundantly cogent reasons. For, he says,

"Thei are not obedyent to the Chirche of Rome, ne to the Pope. And thei seyn that here Patriark hath as meche Power over the See as the Pope hathe on this syde the See. And therefore Pope Johne the 22nd sende Lettres to hem, how Cristene Feithe scholde ben alle on; and that thei scholde ben obedyent to the Pope that is Goddis Vacrie on Erthe, to whom God gaf his pleyn Power for to bynde and to assoill. And thei senten azen dyverse Answeres; and amonges othere, thei seyden thus—*We trowe wel that thi Power is gret upon the Subgettes. We mai not suffre thin highe Pryde. We ben not in purpos to fulfille thi great Covetyse. Lord be with The; For oure Lord is with us. Fare Welle.*"

Sir John concludes this chapter of his pilgrimage, with a sight of the Geeek "*A B C*, what Lettres thei ben, with the names that thei clepen them;" and he observes apologetically for his details, "alle be it that theise touchen not to o way, nevertheless thei touchen to that that I have hight zou, to schewe zou a partie of Custumes and Maneres, and dyversitees of Contrees. For many Men have gret lyk-nye to here speke of straunge thinges of dyverse contreyes."

Our communicative journeyer enlivens "the Weye fro Costantynoble to Jerusalem" with a view of the "Tombe of Seynt John, in the whiche is noughte but Manna that is clept Aungeles Mete," and the episode of "the Doughtre of Ypocras," with a due portion of topographical speculation. We transcribe this episode for the gratification of our kind friends, who promise a reasonable share of advantage to the *ANALYST*, from the occasional introduction of an essay in "*Light Reading*:" and here it follows.

From Crete "passen Men thorghe the Ile of Colos, of the whiche Iles Ypocras was Lord offe. And some Men seyn that in this Ile is zit the Doughtre of Ypocras in forme and lykenesse of a gret Dragoun that is an hundred Fadme of lengthe, as Men seyn, for I have not seen hire. And thei of the Iles callen hire the Lady of the Lond. And sche lyethe in an old Castelle in a Cave, and scheweth twyes or thryes in the Zeer. And sche dothe non harm to no Man, but zif Men don hire harm. And sche was thus chaunged and transformed from a fair Damysele into lykenesse of a Dragoun be a goddesse that was clept Deane. And Men seyn that sche schalle so endure in that forme of a Dragoun unto the tyme that a knyghte come that is so hardy that dar come to hire and kisse hire on the Mowthe: And then schalle sche turne azen to hire owne Kynde, and ben a Woman azen; But afre that sche schalle not liven longe. And it is not longe sith then that a kynghte of the Rodes that was hardy and doughty in Armes, seyde that he wolde kyssen hire. And whan he was upon his Course, and wente to the Castelle, and entred in to the Cave, the Dragoun lifte up hire Hed azenst him. And whan the knyghte saw hire in that forme so hidous and so horrible, he fleyghe away. And the Dragoun bare tho knyghte upon a Roche, mawgre his Hede; and from that Roche sche caste him in to the See; and so was lost bothe Hors and Man. And also a zonge Man, that wiste not of the Dragoun, wente out of a Schipp, and wente thorghe the Ile till that he come to the Castelle and cam into the Cave, and wente so longe til that he fond a Chambre, and there he saughe a Damysele that kembed hire Hede and lokede in a Myrour; and sche hadde meche Tresoure abouten hire: and he trowed that sche hadde ben a comoun Woman that dwelled there to resceyve Men to Folye. And he abode till the Damysele saughe the Schadewe of him in the Myrour. And sche turned hire toward him, and asked him what he wolde. And he seyde, he wolde ben hire Limman or Paramour. And sche asked him zif that he were a knyghte. And he seyde nay. And then sche seyde that he myghte not ben hire Lemman. But sche bad him gon azen unto his Felowes and make him knyghte, and come azen on the Morwe, and sche scholde come out of the Cave before him, and thanne come and kysse hire on the Mowthe, and have no Drede; for I schalle do the no maner harm, alle be it that thou see me in Lykenesse of a Dragoun. For thoughe thou see me hidouse and horrible to loken onne, I do the to wytene that it is made be enchantment. For withouten doute I am non other than that thou seest now, a Woman; and therefore drede the noughte. And zif thou kysse me, thou schalt have alle this Tresoure and be my Lord, and Lord also of alle that Ile. And he departed fro hire and wente to his

Felowes, and cam azen upon the Morwe for to kisse this Damysele. And whan he saughe hire comen out of the Cave, in forme of a Dragoun, so hi-



douse and so horrible, he hadde so gret drede that he fleyghe azen to the schippe; and sche folowed him. And whan sche saughe that he turned not azen, sche began to crye as a thing that hadde meche Sorwe: and thanne sche turned azen in to hire Cave; and anon the knyghte dyede. And sith then hidrewards myghte no knyghte se hire but that he dyede anon. But whan a knyghte comethe that is so hardy to kisse hire, he schalle not dye, but he schalle turne the Damysele in to hire righte Forme and kyndely Schapp, and he schalle be Lord of alle the Contreyes and Iles aboveseyd."

Pilgrims journeying to Jerusalem would find a useful "guide-book" in the Knyghte's Voiage to the Londe bezond the See, for he carefully directs "Men," by miles and land-marks and marvels, how to visit and view the "cytees of Rodes, Cipre, Thire, Sarphen, Sydon, Akoun, Gaza, Cesaire, Ascolonge, Jaffe," and thence to the holy city. For the generous purpose of creating amusement by the way, he describes a "Fosse, the which is 100 Cubytes of largenesse, and alle fulle of Gravelle schynyng brighte, of the whiche men maken fair Verres and clere: and men comen fro fer for to fetten of that Gravelle; and thoughe there be nevere so moche taken away there of on the day at Morwe it is as fulle azen as evere it was. There is everemore gret Wynd in that Fosse that stereth everemore the Gravelle, and makethe it trouble: and zif ony Man do thereinne ony maner Metalle it turneth anon to Glasse; and the Glasse that is made of that Gravelle, zif it be don azen in to the Gravelle, it turnethe anon in to Gravelle as it was first, and therfore somme Men seyn

that it is a swelghe of the gravely See." Now truly, as Sir John says, this "is a gret mervaille," and may have proved a good inducement with our generous Bibliopole to represent the process in a bold graphic illustration. This is accompanied by another in which Sampson appears exerting his strength to make a great halle falle upon the Philistienes the whiche had put out his Eyen, and schaven his Hed, enprisound him be Tresoun of Dalida his paramour.

Our "Travailere's" account of Cyprus would be duly appreciated in the days of his pilgrimage. He delineates the geography and ecclesiastical institutions of this island, without omitting notes on "Dis-mas the gode Theef;" and on some of the earlier "seynts" who, it seems, were either born or buried in this happy country. They of this "Londe" have a rather singular domestic custom: at meals, "they had lever sythen in the erthe than setten formes and tables." We are informed that here it is the manere of Lordis and alle othere men to eten on the erthe; for they make dyches in the erthe alle aboute in the halle depe to the knee and thei do pave hem, and whan thei wil ete thei gou there in and sytten here; and the skylle is, for thei may ben the more fressche, for that londe is meche more hotter than it is here." Field-sports, in Sir John's time, were not neglected by the Cyprian squires: for they, he relates, hunten with Papyonns that ben lyche Lepardes, and they taken wylde bestes righte welle, and thei ben somdelle more than Lyouns, and thei taken more scharpely the bestes and more delyverly than don Houndes. While the fancier of word-lore may be exercising his ingenuity on the *Papyonns*, we submit a figure of this clever animal to the attention of practical zoologists.



In his introduction to the "Voiage," the editor justly estimates the suggestion "that Maundeville may never have gone to the east at all, but compiled his book out of previous journals"—a suggestion alike flimsy and unjustifiable. It is refuted by the knightly journalist's own declaration. At page 35 we find him stating explicitly that

"At Babyloyne, there dwelleth the Soudan in his Calahelyke, in a fair Castelle strong and gret and wel sett upon a Roche. In that Castelle duellen, alle way to kepe it and to serve the Sowdan, mo than 6000 persones that taken alle here Necessarys of the Sowdanes Court. *I oughle righte wel to known it, for I duelled with him as Soudyowr in his Werres a gret while asen the Bedoynes.* And he wolde have maryed me full highely to a gret Princes Daughtre zif I wolde han forsaken my Lawe and my Beleve. But I thank God I had no will to don it for no thing that he beighten me."

Again, in noticing him the whiche leet sle his brother previlyfor to have the Lordschipe, and made him to ben clept Melechmadabron, Sir John says, at p. 39, "*and he was Soudan what I departed fro the Contrees.*" Several other places of our pilgrim's "Travaille" (as pp. 4, 130, 137, 167, 169, 180-1, 190, 219, 220-1, 235, 264, and 314-15-16) retain distinct evidences of his actually having visited the far distant east, and ben dwellyng amonges many a dyverse folk of dyverse secte and beleve, and of his having made his Tretys afre information of men that knewen of thinges that he hadde not seen himself, and also of marveyles and customes that he hadde seen himself as fer as God wolde zeve him grace. His good faith is manifest in this passage. After having told yow som of the Wayes, by the Londe and eke by Water, how that Men mowen goon unto Jerusalem, he adds a description of another waye, alle by Londe un to Jerusalem and passe noon See from Fraunce or Flaundres, comprizing an account of *Batho*, the foulest Contree and the most cursed and the poorest that men knownen. At page 130, he remarks, distinctly and candidly, "I have not ben in that Contree ne be tho Weyes, but I have ben at other Londes that marchen to tho Contrees, and in the Lond of Russye and in the Lond of Nyflan and in the Reme of Crako and of Letto and in the Reme of Daresten and in manye other places that marchen to the Costes; but I wente never by that weye to Jerusalem; wherfore I may not wel telle zou the manere." In fine, after depicting the wealth and splendour of the "Grete Chane of Chatay," our spirited topographer proceeds to say, at page 220,

"And zee schulle undirstonde that my Felowes and I, with oure Zomen, we serveden this Emperour and weren his Soudyowres, 15 monethes, azenst the kyng of Mancy, that held Werre azenst him. And the cause was, for we hadden gret lust to see his Noblesse and the Estat of his Court, and alle his Governance to wite zif it were suche, as wee herde seye that it was. And treuly we fond it more noble and more excellent and ricchere and more marveyllous than ever we herde speke offe, in so moche that we wolde never han leved it, had wee not seen it. For I trowe that no Man wolde beleve the noblesse, the richesse, ne the multytude of folk that ben in his Court, but he had seen it. For it is not there as it is here; for the Lordes here han

folk of certain nombre als they may suffice, but the gret Chane hath every day folke at his Costages and Expenses as withouten nombre. But the Ordynance, ne the expenses in mete and drynk, ne the honestee ne the clenness, is not so arrayed there as it is here; for alle the Comouns there eten withouten Clothe upon here knees, and thei eten alle maner of Flessche and litylle of Bred. And after Mete thei wypen here Hondes upon here Skyrtes, and thei eten not but ones a day. But the Estat of Lordes is fulle gret and riche and noble. And alle be it that sum men wil not trow me, but holden it for Fable to tell him the Noblesse of his persone and of his Estate and of his Court, and of the gret multytude of folk that he holt, natheless I schalle seye zou a partye of him and of his folk, aftré that I have seen, the manere and the ordynance, fulle many a tyme. And whoso that wol may leve me zif he wille; and whoso wille not may chuse; for I wot wel zif ony man hathe ben in tho Contrees bezonde, though he have not ben in the place where the grete Chane duellythe, he schalle here speak of him so meche mervelouse thing that he schalle not trowe it lightly: and treuly no more did I my self til I saughe it. And those that han ben in tho Contrees, and in the great Chane's Houshold, knowen wel that I seye sothe."

Now, in these extracts and references, there is full and fair reason for concluding that "Sir John Maundeville's Voiage and Travaile" was a true pilgrimage, and that "he departed from oure contrees and passed the Sec, the Zeer of Grace 1322, and passed manye Londres and manye Yles and Contrees, and cerched manye fulle straunge plaoces, and have ben in manye a fulle gode honourable Companye, and at many a faire Dede of Armes."

In the section where Sir John treats of many Soudans and of the "Tour of Babiloyne," he inserts a diversity of historical sketches, and adorns them with the pageantry of monkish or legendary inventions and disfigured notes of events recorded in the sacred writings. Here follows a saintly tale, with a lively representation.

"The Mount of Synay is clept the Desert of Syne, that is to seyne, the Bussche brennyng. There is an Abbeye of Monkes, wel bylded and wel closed with Zates of Iren, for drede of the wylde Bestes. And the Monkes



ben Arabyenes or Men of Greece: and alle thei ben as Herrenytes; and thei drynken no Wyn, but zif it be on principalle Festes; and thei ben fulle devoute Men, and lyven porely and sympely with Joutes and Dates; and they don gret Abstynence and Pensance. There is the Chirche of Seynte Kateryne, in the whiche ben manye Lampes brennyng. For thei han of Oyle of Olyves y now, bothe for to brenne in here lamps and to ete also. And that plentee have thei be the Myracle of God. For the Ravens and the Crows and the Choughes and othere Foules of the Contree assemble hem there every Zeer ones, and fleen thidere as in pilgrimage; and everyche of hem bryngethe a Braunche of the Bayes or of Olyve in here Bekes in stede of Offyrng and leven hem there; of the whyche the Monkes maken gret plentee of Oyle, and this is a gret Marvaylle. And sithe that Foules that have no kyndely Wytt ne Resoun gon thidre to seche that gloriouse Virgyne, wel more oughten Men than to seche hire and to worschipe hire. Also behynde the Awtier of that Chirche is the place where Moyse saughe oure Lord God in a brennynge Bussche; and whanne the Monkes entren into that place thei don of bothe Hosen and Schoon or Botes always, because that oure Lord seyde to Moyse, *Do of thin Hosen and thi Schoon, for the place that thou stondest on is Lond holy and blessed.*"

Having descanted largely on the merveylls and maneres of Palestine, Syria, and the adjacent countries—as the deserte betwene the chirche of Seynt Kateryne and Jerusalem, the dri Tre and how roes came first in the worlde; the pilgrimages in Jerusalem and the holy places thereabout; the temple of oure Lord, the crueltee of Heroud, the Mount Syon, the Probatica Piscina, and the Natatorium Siloe; the dede See and the flom Jordan; the hed of Seynt John and the usages of the Samaritanes; the province of Galilee, and where antichrist schalle be borne; the cytee of Nazareth, the age of our Ladie, the day of doom, and the customes of the Jacobites, Surryenes, and Georgyenes; the cytee of Damasce and the thre weyes to Jerusalem—Sir John endeavours to depict the usages of the Sarasines; tells how the Soudan arresond the auctor of this book; and then relates the "begynnyng of Machomete, who was first a pore knave that kept cameles, and wenten with marchantes for merchandize." The "Londes of Albanye and Libye" are next brought under observation, and the topographer diversifies his picture with a tale of the "Wisshinges for Wacching of the Sperhawk," and a tradition respecting "Noes Schippe," as an element in the system of popish mystification. Thus, you are told that

"Fro the cytee of Artyzoun go men to an hille that is clept Sabissocolle, and there besyde is another hille that men clepen Ararat, but the Jews clepen it Tanees, where Noes Schippe rested and zit is upon that montayne, and men may seen it a ferr in cleer wedre. And that montayne is wel a 7 myle highe. And sum men seyn that thei have seen and touched the Schippe, and put here fyngres in the parties where the feend went out, when that Noe seyde *Benedicite*. But thei, that seyne such wordes, seyn here wille, for a man may not gon up the montayne for gret plentee of snow that is alle weyes on that montayne, nouthre somer ne wynter; so that no man may gon up there, ne nevere man dide sithe the tyme of Noe, saf a monk that, by the grace of God, brought on of the planks down, that zit is in the Mynstre at the foote of the montayne. Upon that montayne to gon up, this monk had gret desir; and so upon a day he wente up, and whan he was upward the 3

part of the montayne he was so wery that he might go no further; and so he rested him and felle o slepe; and whan he awook he founde him self liggynge at the foot of the montayne. And than he preyede devoutlye to God that he wolde vouchsafe to suffre him gon up. And an Angelle cam to him and seyde that he scholde gon up, and so he dide. And siths that tyme neverenon; wherfore men scholde not beleewe suche wordes.”*

With his chorography of the “Londe of Job” and the “Yle of Amazoyn,” our communicative wanderer furnishes his readers with a note on Manna, and a disquisition on the verray Dyamant, its knowleche and vertues. He eulogizes the Lond of Job as a fulle fair contree and a plentyous of alle godes. In that Lond, he says, “there ys no defaute of no thing that is nedefulle to mannes body. There ben hilles where men geten gret plentee of Manna, in gretter habundance than in any other contree. This Manna is clept Bred of Aungeles, and it is a white thing that is full swete and righte delicious, and more swete than hony or sugre; and it comethe of the dew of heaven that fallethe upon the herbes in that countree, and it congelethe and becomethe all white and swete; and thei putten it in Medicynes for riche men to purge evylle blode, for it puttethe out malencolye.” With his “loose notes” on Ethiopia, he introduces Pliny’s fable of the Monocelli or *sciopods*, “the whiche ben folk that han but o foot, and thei gon so fast that it is marvaylle; and the foot is



* An improved version of this legendary adventure has a place in Chardin's *Travels—Voyages en Perse et autres lieux de l'Orient*; 4to, four volumes, Amsterdam, 1785.

so large that it schadowethe alle the bodye azen the sonne whanne thei wole lye and reste them :” and here is a joyous gentleman reposing in that comfortable position.

Following our guide on his eastward “travaile,” we find him describing the customes of the Yles abouten Ynde, the difference betwixt Ydoles and Symulacres, the 3 maner growing of Peper on a tree, and the Welle that chaungethe his odour every hour of the day.

“Symulacres,” he affirms, “ben ymages made afre lykenesse of men or women, or of the sonne or of the mone, or of any best, or of any kyndely thing; and Ydoles is an ymage made of lewed wille of man, that man may not fynden among kyndely things, as an ymage that hathe 4 heds, on of a man, another of an hors, or of an ox, or of some other best, that no man hathe seyn afre kyndely disposicioun.” Regarding the vegetation and culture of Pepper, “zee schulle undirstonde that the peper growethe in maner as dothe a wylde Vyne that is planted fast by the trees of that wode for to susteynen it by. And the fruyt thereof hangethe in manere as reysynges, and the tre is so thikke charged that it semethe that it wolde breke; and whan it is ripe it is alle grene as it were Ivy Beryes; and than men kyttten hem as men don the vynes, and than thei putten it upon an oven, and there it waxethe blak and crisp. And there is 3 maner of peper alle upon o tre; long peper, blak peper, and white peper. The long peper men clepen *Sorbotyn*, and the blak peper is clept *Fulfulle*, and the white peper is clept *Bano*. The long peper comethe first, whan the lef begynneth to come, and it is lyche the chattes of haselle that comethe before the lef, and it hangethe lowe. And afre comethe the blak with the lef in manere of clusteres of resynges alle grene; and whan men han gadred it than comethe the white that is somdelle lasse than the blak; and of that, men bryngen but litille in to this contree.”

Like the “Holy Wells” of the West, our traveller’s “Welle of Zouthe” was marvellously salubrious. He thus defines its virtues:

“Near the cytee of Polombe is a grete montayne, and at the foot of that mount is a fayr Welle and a gret, that hathe odour and savour of alle spices. And at every hour of the day, he chaungethe his odour and his savour diversely; and whoso drynkethe 3 tymes fasting of that watre of that Welle he is hool of alle maner sykenesse that he hathe. And thei that duellen there and drynken often of that Welle, thei nevere han sykenesse and thei semen alle weys zonge. *I have dronken therof 3 or 4 sithes*, and zit methinkethe I fare the better. Sum men clepen it the *Welle of Zouthe*, for thei that often drynken there of semen alle weys zongly and leven with outen sykenesse. And men seyn that that Welle comethe out of Parady, and therefore it is so vertuous.”

Sir John next enters on an interesting account of the Domes made be Seynt Thomas in the cytee of Calamye, of the Devocoun and Sacrifice made to Ydoles there, and of the Procession of the Ydole’s Chare aboute the cytee: then he describes the evylle customes used in the Yle of Lamary: and then he engages in an astronomical disquisition to prove how the Erthe and the See ben of round forme and schapp, be pref of the sterre that is clept *Antartyk*, that is fix in the southe.

Passing with our conductor into the Yle of Java, we accompany him over the Palays of the kyng of that gret contree, the whiche is

ayghe 2000 myle in circuyt. With something of the bearing of a botanist, he speaks of the trees that beren mele, hony, wyn, and veynym, and of othere mervaylles and customes used in the yles marchinge thereabouten. This yle, he tells you, is fulle wel inhabyted: there growen alle maner of spicerie, more plentyfous liche than in any other contree; as of gyngevere, clowegylofres, canelle, zedewalle, notemuges, and maces. And wytethe wel that the notemuge berethe the maces; for righte as the note of the haselle hathe an husk with outen, that the note is closed intil it be ripe and aftre fallethe out, righte so it is of the notemuge and of the maces. Manye other spices and manye other godes growen in that yle. As Pliny the naturalist had done before him, Sir John avouches the existence of certain extraordinary lacustrine canes found in this island, and he concludes his summary of their uses, with the asseveration—and deme no man that I seye it but for a truffule, for I have seen of the cannes, with myn owne eyzen fulle manye times, lyggyng upon the ryvere of that lake, of the whiche 20 of oure felowes ne myghten not liften up ne beren on to the erthe. Among the yles in the See Oceau, he continues, there is a gret yle and good and fayr, and men clepen it *Nacumera*, and it is in kompass aboute more than a 1000 myle. And alle the men and wömen han Houndes Hedes, and thei ben clept *Cynocephali*, and thei ben fulle resonable and of gode undirstondyng, saf that thei worschipen an Ox for here god. And also everyche of hem berethe an ox of gold or of sylver in his forhed, in token that thei loven wel here god. And thei gon alle naked saf a lityelle clout that thei coveren with here knees and hire members. Thei ben grete folke and wel fyghtyng, and thei han a gret targe that coverethe alle the bodye, and a spere in here hond to fighte with. And zif thei taken any man in bataylle, anon thei eten him. Here stands the cy-



nocephalous portraiture, exhibiting a marked resemblance to *Anubis*, with symbols of the Egyptian mythology.

Marvels and satyres, cyclopes and hermaphrodites, panotes and hippopodes, monkes and babewynes, dwerghes and geauntes, with folk of dyverse schap and merveylously disfigured, are main topics in the nineteenth chapter of our knyghte's lucubrations. He depicts the "Lond of Pigmaus" with much vivacity.

"There," he says, "the folk ben of litylle stature that ben but 3 span long, and thei ben ryghte faire and gentyle afre here quantytees, both the men and the women. And thei maryen hem whan thei ben half zere of age and geten children; and thei lyven not but 6 zeer or 7 at the mōste. And he that lyveth 8 zeer, men holden him there ryghte passynge old. These men ben the beste, worcheres of gold, sylver, cotoun, sylk, and of alle suche thinges, of any other, that be in the world. And they han often times werre



with the briddes of the contree that thei taken and eten. This litylle folk nouthur labouren in londes ne in vynes; but thei han grete men amonges hem, of oure stature, that tylen the lond and labouren amonges the vynes for hem; and of tho men of our stature have thei als grete skorne and wondre as we wolde have amonges us of geauntes, zif thei weren amonges us. There is a gode cytee amonges othere where is duellynge gret plentee of tho litylle folk; and it is a gret cytee and a faire, and the men ben grete that duellen amonges hem; but whan thei geten any children thei ben als litylle as the pygmees, and therfore thei ben alle, for the most part, alle pigmees, for the nature of the lond is suche. And alle be it that the pigmees ben litylle, zit thei ben fulle resonable afre here age, and connen bothen wytt and gode and malice y now."

The great "Chane of Chatay" obtains a full share of our knyghte's attention, and the journalist appears to speak, in part at least, from personal observation. He relates, in ample detail, the circumstances of this prince's court and kingdom, beginning with the rialtes of the Chane's palays, how he sits at Mete, and the grete number of officers that serve him. We are then entrusted with a knowledge of the reasons wherefore this mighty monarch is denominated, or clept, the Grete Chane; with the style of his letters and the superscriptions on his seals; with the governance of his court whan he maketh solemnn feasts, four times in the year; and with an account of his array when he rideth through the country. We cannot fail of admiring the magnificence of his domestic economy, as displayed in Sir John's programme of an imperial entertainment. In addition to the nobles and other high personages usually admitted to the enjoyemnt of royal hospitality, we are informed, with a pleasing seriousness, that

"At o syde of the Emperour's table, sitten manye Philosophres that ben preved for wise men, in manye dyverse scyences; as of astronomye, nigromancye, geomancye, pyromancye, ydromancye, and augurye. And everyche of hem han before hem astrolabres of gold, sum speres, sum the brayn-panne of a ded man, sum vesselles of gold fulle of gravele or sond, sum vesselles of gold fulle of coles brennyng, sum vesselles of gold fulle of watre and of wyn and of oyle, and sum oriloges of gold mad ful nobely and richly wroughte, and manye othere maner of instruments after hire scyences. And at certyn houres whan hem thinkethe tyme thei seyn to certeyn officeres that stonden before hem, ordeynd for the tyme to fuillille hire cōmaundements, *Makethe Pees*; and than seyn the officeres, *now Pees lystene thes*. And afre that, seyth another of the philosophres, *everyche man do reverence and encline to the Emperour that is Goddes sone and soverayn lord of alle the world, for now is tyme*; and thanne everyche man bowethe his hed toward the erthe. And thanne cōmaundethe the same philosophre azen, *Stondethe up*; and thei don so. And at another houre seythe another philosophre, *Putte the xoure litylle fynger in xoure eres*; and anon thei don so. And at another houre, seythe another philosophre, *Puttethe xoure honde before xoure moute*; and anon thei don so. And at another houre, seythe another philosophre, *Puttethe xoure honde upon xoure hed*. And afre that, he byddethe hem *to done here honde a wey*; and thei don so. And so from houre to houre thei cōmaunden certeyn thinges; and thei seyn that tho thinges han dyverse significaciouns. And *I asked hem prevyly* what tho thinges betokened; and on of the maistres told me that the bowynge of the hed at that houre betokened this, that alle tho that boweden here hedes sholden evere more afre ben obeysant and true to the Emperour, and nevere for ziftes ne for promys in no kynde ben fals ne traytour unto him for gode ne evylle. And the puttyng of the litylle fynger in the ere betokenethe that none of hem ne schalle not here, speke no contrarious thing to the Emperour, but that he schalle telle it anon to his conseilte or discovere it to sum men that wille make relacioun to the Emperour, though he were his fadre or brother or sone. And so forthe of alle othere thinges that is don be the philosophres, thei tolde the causes of manye dyverse thinges; and trustethe righte wel in certeyn that no man dothe no thing to the Emperoure that belongethe unto him, nouthur clothinge, ne bred, ne wyn, ne bathe, ne non othere thinge that longethe to him, but at certeyn houres that his philosophres wille devyzen. And zif there falle werre in any side to the Emperour, anon the philosophres comen and seyn here avys afre here calculaciouns, and conseynen the Emperour of here avys be here scyences; so that the Emperour dothe no thing with outen here conseilte."

The "Grete Chane" also keeps his "Jogulours and Enchauntoures," and dancing damsels, and keepers of wild beasts, and "knyghtes to jousten in armes fulle lustyly, and thei rennen to gidere fulle fiercely, and thei breken here speres so rudely that the troncheons flew in sprotes and peces alle aboute the halle." He has likewise of

"Mynstralles the nombre of 13 cumancz; and he hathe of certeyn men, as though thei were zomen, that kepen bryddes, as ostryches, gersacouns, sparehaukes, faukons, gentyls, lanyeres, sacres, sacrettes, papyngayes wel spekyng, and bryddes syngynge; and also of wyld bestes as of olifauntz, babewynes, apes, marmesettes, and othere dyverse bestes; the mountance of 15 cumancz of zomen. And of physicyens cristene he hathe 200, and of leches that ben cristene he hathe 210, and of leches and physicyens that ben Sarrazines 20. This Emperour may dispenden als moche as he wille with outen estymacioun, for he dispendethe not ne makethe no moneye but of leather emprented or of papyre; and of that moneye is som of gretten prys and som of lasse prys, afre the dyversitee of his statutes; and whan that moneye hathe ronne so longe that it begynneth to waste, than men beren it to the Emperoure's tresorye, and than thei taken newe moneye for the olde; and that moneye gothe thorghe out alle the contree and alle his provynces; and therefore he may dispende y now and outrageously."

Our "Voiagere" next discourses upon the "Lawe and Costomes of the Tartariennes duellynge in Chatay;" and, in this portion of his Boke he communicates many interesting particulars concerning this extraordinary people, and these certainly deserve the attention of students desirous of procuring an acquaintance with the elements of oriental history. The following subjects are treated more rapidly, but



they give sketches of men and manners which modern travellers have confirmed. Here, he treats of the Roialme of Tharse and the londes and kyngdomes towards the septentrionale partes, in comynge down from the land of Cathay : of the Emperour of Persye and of the lond of derknesse, and of othere kyngdomes that belongen to the Grete Chane of Cathay, and other londes of his unto the See of Grece : and of the contrees and yles that ben bezonde the Lond of Cathay, of the Frutes there, and of 22 kynges enclosed within the montaynes. To the admirers of vegetable marvayles, Sir John's remarks on the Frutes of these contrees may afford edification.

"Wherefore I seye zou," he observes, "that, in passynge be the Lond of Cathay toward the highe Ynde and toward Bacharye, men passen be a kyngdome that men clepen Caldilhe, that is a fulle fair contree. And there growethe a maner of fruyt as thoughe it weren gowrdes, and whan thei ben rype men kутten hem a to, and men fynden with inne a lytylle best, in flessche in bōn and blode, as thoughe it were a lytylle lomb with outen wolle. And men eten both the frute and the best, and that is a grete marveylye : of that fruyt I have eten, alle thoughe it were wonderfulle, but that I know wel that God is marveyllous in his werkes."

Prester John's country and his royal estate are painted in fair colours ; and, somewhat in the foreground, stands an account of a riche man that made a marveyllous castelle and cleped it Paradys. In this dreed sovereign's dominions is the "Gravelly See," and

"A 3 journeys long fro that see, ben gret montaynes, out of the whiche gothe out a gret flome that comethe out of paradys, and it renneth thorghe the desert on that o syde, so that it makethe the see gravelly. And in that desert ben manye wylde men that been hidouse to loken on, for thei ben



horned, and thei speken nought, but thei gromten as pigges. And there is also gret plentee of wyld houndes; and there ben manye popegayes that they clepen psitakes in hire langage, and thei speken of hire propre nature, and salven men, that gon thorghe the desertes, and speken to hem als apertely as though it were a man. And thei that speken wel han a large tonge and han 5 toos upon a fote: and there ben also of othere manere that han but three toos, and thei speken not, or but lytylle, for thei con not but cryen."

In conferring farther on the "Lordscipe of Prestre John," our kind instructor favours us with a picture of the "Develes Hed in the Valeye Perilouse in mydde place of the whiche, under a roche, is an hede and the visage of a devyl bodyliche, and he beholdethe everysche man so scharply with dreadfulle eyen that ben evere more mevyng and sparklyng as fuyr, with so horrible countenance, that no man dar not neighen him; and fro him comethe out smoke and stink and fuyr, and so moche abhomynacioun that unethe no man may there endure." Journeying from the isles of the Lordschipe, of whiche the moral and natural history are briefly sketched, we arrive at the "Yle of Bragman," and are delighted at finding it gret, gode and plentyfous, where ben gode folk and trewe, and of gode lyvyng aftr hire beleve, and of gode feythe. A neighbouring island is clepen Gnosophe, and its inhabitants are gode folk and fulle of gode feythe; but thei gon alle naked. Their wisdom is exemplified in a dialogue between Alexander the Great and the men of that contree. In the following section, we read of the "hilles of gold that Pissemyres kepen," and of the four Flômes that issue from the terrestrial paradise. These golden hills, "as men seyn," are in the Yle of Taprobane, and there, in Sir John's diction,

"Ben grete hilles of gold that Pissemyres kepen fulle diligently: and thei frymen the pured gold and casten away the unpured. And theise Pissemyres ben grete as houndes, so that no man may get of that gold but be grete sleighte; and therfore whan it is grete hete the Pissemyres resten hem in the erthe from pryme of the day in to noon, and than the folk of the contree taken camayles, dromedaries and hors, and othere bestes, and gon thidre and chargen hem in alle haste that thei may; and aftr that thei fleen away in alle haste that the bestes may go, or the Pissemyres comen out of the erthe; and in other tymes whan it is not so hote, and that the Pissemyres ne resten hem not in the erthe, than thei geten gold be this so-tyltee; thei taken mares that han zonge coltes or foles and leyn upon the mares voyde vesselles made therfore, and thei ben alle open aboven and hangyng lowe to the erthe, and thanne thei sende forth the mares for to pasturen aboute tho hilles, and with holden the foles with hem at home. And whan the pissemyres sen tho vesselles thei lepen in anon, and thei han this kynde that thei lete no thinge ben empty among hem, but anon thei fillen it, be it what maner of thinge that it be, and so thei fillen tho vesselles with gold. And whan that the folk supposen that the vesselles ben fulle thei putten forth anon the zonge foles and maken hem to nyzen aftr hire dames, and than anon the mares retornen towards hire foles with hire charytee of gold, and than men dischargen hem and geten gold y now be this so-tyltee; for the Pissemyres* wole suffren bestes to gon and pasturen amonges hem, but no man in no wyse."

* It might be a theme for Naturalists to decide whether or no this orien-



Among the customs of the kings and their people that dwell in the islands "costynge to Prestre Johnes Londe, the worshippe that the sone do the fader whan he is dede," appears to be the most remarkable. It consists of the most revolting ceremonies; thus,

"Whan the fader is ded of ony man, and the sone list to do gret worshippe to his fader, he sendeth to alle his friendes, and to alle his kyn, and for religious men and preestes, and for mynstralle also, in gret plentee. And thanne men beren the dede bodye unto a grete hille, with grete joye and solempnyte; and whan thei han brought it thider the chief prelate smytethe of the hede and leyethe it upon a grete plater of gold or of sylver, zif so be he be a riche man; and thanne he takethe the hede to the sone, and thanne the sone and his othere kyn syngen and seyn many orisouns; and thanne the preestes and the religious men smyten alle the bodye of the dede man in peeces; and thanne thei seyn certyn orisouns. And the foules of raveyne of alle the contree abouten knowen the custom of longe tyme before, and comen fleenge aboven in the eyr, as egles, gledes, ravenes, and othere foules of raveyne that eten flessche; and thanne the preestes casten the gobettes of the flessche, and thanne the foules eche of hem takethe that he may and gothe a litille thens and etethe it; and so thei don whils ony pece lastethe of the dede bodye; and aftere that the preestes syngen for the dede. And thanne semethe it to the sone that he is highliche worshippt whan that manye briddes and foules and raveyne comen and eten his fader; and he that hathe most nombre of foules, is moste worshiped. Thanne the sone bryngethe

tal legend concerning the "Pissemyres" may not have derived its origin from a fantastic consideration of the Termites and the wonderful sagacity displayed in their labours and their social economy. Consult the *Philosophical Transactions*: vol. 73, p. 139, 1781.

hoom with him alle his kyn and his frends and alle the othere of his hows, and makethe hem a grete feste. And whan thei ben at mete, the sone let brynge forthe the hede of his fader and there of he zevethe of the flesche to his most specyalle frendes in stede of Entre Messe or a sukkarte. And of the brayn panne he lettethe make a cuppe and there of drynkethe he, and his othere frendes also, with grete devocioun, in remembraunce of the holy man that the sungeles of God han eten; and that cuppe the sone schalle kepe to drynken of alle his lif tyme, in remembraunce of his fader."

Another of the islands is represented as being a great kingdom where the king is full rich and mighty; and, amongst the rich men of the country, there is a passing rich man that hath every year an annual rent of three hundred thousand horse charged with corn, rice and different kinds of grain. Now, this wealthy personage leadeth a noble and delicate life; for, says the historian,

"He hathe every day fifty fair damyseles, alle maydens, that serven him everemore at his mete; and whan he is at table, thei bryngen him hys mete at every tyme. 5 and 5 to gedre; and in bryngyng hire servyse thei synge a song; and after that thei kutten his mete and putten it in his mouth; for he touchethe no thinge, he handlethe nought, but holden evere more his honds before him upon the table. For he hathe so longe nayles that he may



take no thinge, ne handle no thinge. For the noblesse of that contree is to have longe nayles, and to make hem growen alle ways to bend as longe as men may. And there ben manye in that contree that han hire nayles so longe that thei environne alle the hond; and that is a gret noblesse. And the noblesse of the wōmen is for to haven smale feet and littille; and therfore anon as thei ben born, thei leet bynde hire feet so streyte that thei may not growen half as nature wolde. And alle ways theise damyseles, that I spak of

beforn, syngen alle the tyme that this riche man etethe; and whan he eteth no more of his cours, thanne othere 5 and 5 of fair damyseles bryngen him his seconde cours, alle weys syngyng as thei did befor; and so thei don contynuelly every day to the ende of his mete; and in this manner he ledethe his lif; and so did thei before him that weren his auncestores, and so schalle thei that comen afre him with outen doynge of ony dedes of armes, but lyven evere more thus in ese as a swyn that is fedde in sty for to ben made fatte."

From the preceding analytical sketches, the archæologist may elicit motives to institute an attentive perusal of SIR JOHN MAUNDEVILLE'S *Voiage and Travaile*, for the purpose of discriminating such of his facts and observations as have been confirmed by subsequent experience, from the flourishes of fiction wherewithal his venerable chorography is liberally arrayed. With regard to the marvelous stories so readily credited by our author, and the great respect he pays to every relic, as the Editor has judiciously observed, these are not matters of surprize when we consider the enthusiasm of a zealous Roman catholic of the fourteenth century. He was treading on sacred ground, and credited, because he desired to credit, every idle story that came floating before his view. We may grieve over the prostration of a vigorous intellect, in conning the Knight's grete meraycles; but we need not express astonishment nor employ reprehension, on discovering the credulity of a romantic pilgrim, when we reflect that even his tales of saints and monsters, of bugbears and miracles, were originally the elaborate fabrications of "Ghostly Fathers" to whose charge the secular and religious education of Christendom was then confided. Throughout his "Tretys" are interspersed many practical directions which would prove useful to others afterwards engaged in the same course of peregrination: its extraordinary popularity, indeed, as evinced by the numerous M.S.S. and printed editions of his *Travaile*, in various languages, most clearly shows that the book was considered both entertaining and instructive: nevertheless, in all its sections, we may discern the ingenious traveller's powerfulness to detect the detestable contrivances whereby the priesthood laboured, in those days, to paralyze the divinely elastic energies of man's immortal mind.

REVIEWS OF FOREIGN WORKS LATELY
PUBLISHED ON THE CONTINENT.

Geschichte und System der Platonische Philosophie (History and System of the Platonic Philosophy), by Dr. K. Fr. Hermann.
1st Part. Heidelberg, 1838.

SOME years ago, Mr. Hermann, one of the most distinguished scholars, philosophers, and antiquarians of the day, intimated his intention of publishing a complete system of the Platonic Philosophy. That promise, which had excited in no small degree the curiosity of the literary world on the continent, is in part fulfilled by the appearance of the first volume, divided into three books. Though we must confess that the volume before us, so far from completing the system, on the contrary, suggests new points for inquiry, the novel and original point of view, however, which the author has taken to develop the system, will undoubtedly form a new era in the Platonic literature.

The author's plan is, to connect as close as possible the development of Plato's philosophical views with that of his moral and civil life. He is, therefore, not satisfied with the exhibition of a few detached periods in the life of Plato, but follows him through all the stages of his life, as bearing immediately upon his political and philosophical views. The period in which Plato was born leads to the investigation of the administration of Pericles and its consequences, on which Plato animadverted in unsparing terms. Plato's exclusive intercourse with Socrates, which prevented his becoming acquainted with the other philosophical systems of the day, and the subsequent death of the latter, which opened to his view the fallacious systems of his contemporaries, form a peculiar epoch in his life, not only for his philosophical opinions, but also with regard to his political views, having formed but a poor opinion of the principles of justice as prevalent in his native place, which condemned his righteous teacher to a villainous death. This his indignation induced him to decline serving his country practically, by fulfilling some public office, to which he was entitled by birth and station in social life. The author, on the other hand, points skilfully out all the advantages Plato had derived from his travels in Major Greece, and the reconciliation with his countrymen, the result of his intercourse with Dionysius and other influential characters, which also roused in him the confidence of realising his moral notions.

These are the outlines of the first book, in which an historical development of the life of Plato is most elaborately sketched. There

are, however, general points which we would not take *bona fide*, and most particularly the assertion of the author that before the death of Socrates Plato had been unacquainted with the other philosophical systems of the day—a circumstance that is replete with very important consequences for the conclusions and inferences developed in the sequel.

The second book exhibits the various systems of the philosophy of the day, their influence upon, and connection with, that of Plato. The general opinion that Plato had reconciled and adopted in his system the different contradictory views of the other philosophers, does not seem satisfactory to our author, who argues, with a great display of erudition, that Plato had merely worked out the materials of various fallacious views into a system of his own, in which he transforms the *unity* of the Eclectic school into the *principle of form*, the *perpetual creation* of Heraclite into the *principle of matter*, the *creating spirit* of Anaxagoras into a *primitive cause*, and the notion of harmony of Pythagoras into the final end and aim of all the operations of nature in general. In developing the systems of the philosophers just mentioned, the author dwells particularly on the system of the sophists, not only because it preceded more immediately that of Plato, and throws besides great light upon the philosophy of Socrates, but also because the author does not concur in the opinion of those who consider the system of the sophists as a corrupted branch of the vigorous tree of knowledge, but views it rather as the natural fruit of the loose and partial speculations of the preceding philosophers. Whatever the defects and fallacies, the author thinks, of their views may have been, the sophists have the credit of having been the first to single out the reflecting subject, *man*, as the basis of all philosophical contemplations; but while they spoke of man only in his individual and personal quality, Socrates pointed to the whole sphere of humanity, in his sublime relation to the Deity, as the standard of all objects in nature. The application of the Socratic doctrines, however, to the views of nature by the preceding philosophers, soon led to those partial and incorrect notions, as promulgated by the various so-called—though improperly—Socratic schools, until Plato united them all in the harmonic structure of his system.

The third book contains the chronological arrangement of P.'s writings, illustrative of his system; and is of great importance to those readers who have perused *Schleiermacher's* divisions on that head. The latter tries to lend to all the writings of P., his detached discourses not even excepted, a certain *dialectic* method, while Dr. Hermann is opposed to that view for sundry reasons, and thinks it, among others, highly improbable that P. should, in the long career of his authorship, have continually thought and written on a certain fixed plan; he is, therefore, of opinion, that the plan and method of P. underwent the same and simultaneous development as his views, and ripened with them. This the author explains and supports by

such vigorous arguments, as hard and original as they are correct, as to baffle the most strenuous advocates of Schleiermacher's system. After this introduction, the author again resumes the thread of the first two books. The death of Socrates, and P.'s return from his travels, form three periods in P.'s writings, and Dr. H. very ingeniously makes use of three dialogues *Lyris*, *Theactet*, and *Symposium*, to characterise those periods, at the same time that he places *Phædrus*—contrary to the opinion of Schleiermacher—in a far later period. As to the genuineness of the single dialogues, the author considers as forgeries, beside *Axiochus*, *Demodocus*, etc., also the second *Alcibiades*, the *Anterosts*, *Epinomis*, the definitions *Klitophon* and *Theages*, while he refutes the arguments advanced against the genuineness of the lesser *Hippias*, *Ion*, the first *Alcibiades*, *Charmides*, *Lysis*, and *Laches*.

Der Christliche Altar, archäologisch und artistisch dargestellt.

Ein Beitrag zur Geschichte des Altars und zur Erhaltung älterer Kirchendenkmäler und deren Wiederherstellung. Von C. Heideloff. Mit erklärenden Texte von Jeo. Neumann.—(The Christian Altar, represented archæologically and artistically. A contribution to the History of the early Monuments of the Church, and their Restoration. By C. Heideloff. With an explanatory text by Geo. Numann). With eleven copperplates. Nuremberg, 1838.

HOWEVER short the explanatory remarks and observations may appear concerning the grouped figures contained in the work before us, in general the author has nevertheless most carefully noticed the most important incidents. After a few and brief remarks on the origin and names of altars in general, and on their form and nature, among the Jews and heathens, the author begins his description of the christian altar, from the original form of a simple table of the first century, down to the most complicated structure and adornments of the later ages. The main object of the celebrated artist by the exhibition of the numerous groups of altars, seems to have been to draw the attention of the wardens and trustees of churches to the discord that frequently exists between the architecture of the church and the altar, and to assist them to remedy the evil without being absolutely versed in the minutiae of the art. "It often struck me," says the author, "that the colossal altars of the seventeenth and eighteenth centuries were entirely misplaced in churches built in the form of architecture as prevalent in the tenth or fifteenth century. An instance of palpable disharmony of this sort is seen in the Cathedral of Bamberg, which is built in the pure Byzantine style, while the colossal altar, reaching to the very vault of the roof, disfigures the *tout ensem-*

ble as something monstrous. It is astonishing how people calling themselves architects should be so ignorant of the archæology of their art. Even taste and common sense ought to have pointed out to them the absurdity of disfiguring an edifice built on the plan of architecture of the tenth or fifteenth century, by modern ingredients, to erect in it an immensely large altar, giving to the whole the appearance of two distinct churches, one within the other, and not seldom obstructing the view of a fine piece of architecture or window; by such a proceeding they defy all the rules of the art and taste, destroy all harmony of architecture to raise a lasting monument of their own ignorance and vanity."

The sketches of the figures are elegantly executed, and sufficiently illustrated to convey the views of the author. The whole is chronologically arranged, showing at once the architecture of the various ages, and exhibiting to the naked eye its style, symmetry, and peculiar beauties.

Die Herer im Westen und Osten. Eine ethnographische Untersuchung über deren Stammverwandtschaft, nach der Mythe und Geschichte, mit Rück sicht auf die Cultur und Sprache dieses Volks; nebst einer Ansicht der Homerischen Kimmerier und der sogenannten Homerischen Geographie überhaupt. Artemidorus der Geograph.—(*The Iberians in the West and the East*; an ethnographical investigation into their relationship, in accordance with Mythology and History, and with regard to the culture and language of that people; together with a view of the Homeric Cimmerians and the so-called Homeric Geography in general. Artemidorus the Geographer). By Dr. S. F. W. Hoffmann. Leipsic, 1838.

THERE is much information to be gathered, in the first part, concerning the Homeric Geography. The author, however, in fairly establishing the principle that, in treating the subject, we ought not to carry our present better knowledge of geography into the field of investigation to serve as a standard for our research, has himself, on the other hand, violated the very same principle, by placing the Homeric Cimmerians, who are involved in the mist of the fables and fictions of the earliest ages, in the north, and perceiving in them, after the example of Strabbo, a race of people who had settled in the vicinity of the Caspian Sea. It is true that the hypothesis is greatly borne out by a host of popular sayings; yet similar testimonies may be brought in support, also, of Scheria and Ogygia, which the author rejects as pure fables, and for which he hurls his anathema against his predecessors. At all events, it remains difficult to fix a firm

point of view on a subject of that sort, when separated from the whole. Far more satisfactory is the second part, where the author, in opposition to Humboldt, who considers the Iberians of the Pyrenean peninsula as autochthons on philological grounds, renders it very probable that those western Hibernians may have emigrated from the east from some parts of Georgia. Nor can we help expressing our entire satisfaction on the light the author has thrown on the manners, constitution, religion, etc., of the people, as little has hitherto been elucidated concerning them.

The third part, bearing the title "Artemidorus the Geographer," stands in no connexion with the former, and contains, besides his life, copious fragments of his *γεωγραφικὰ μυστήρια*, following Stephanus of Byzantium. Mr. Hoffmann has arranged them according to the order of the books, a task not very difficult, if proper use was made of the copious notes of Stephanus. In the first book, Artemidorus treats of the Gallic coast, and the remaining part of the country of the Celts; in the 2nd and 3rd, of the Hiberians and Lusitanians; in the 4th, of Italy; in the 5th, of Coscyra, Cephalleria, and Ithaca; in the 6th, probably of Greece and the European coast of the Pontus; in the 7th, of Libya; in the 8th, of Egypt and Arabia; in the 9th and 10th, of Asia, as far as Judea; in the 11th, of the eastern and southern coast of the Pontus. Far less is known of Illyria, as the numbers of the book in Stephanus bearing upon that country are, in part at least, corrupted; and if the correctness of *ἡγεῖται* (*Böhm*) be also doubted, there remains but the 5th book, which to judge from the contents, might have treated of it. The author did not add the various critical readings of the text to the fragments. The collection has, therefore, only the merit of showing us all that relates to Artemidorus; but as for the better understanding of the text, the inquisitive reader will be obliged to look out for the various editions, for we know how many blanks there are still left for criticism to fill up in the ancient geographies.

Vom Nexum. Ein Beitrag zur Geschichte des Römischen Rechts (*Of the Nexum; a contribution to the Roman law*), by Dr. Chr. Gottl. Adal. Scheurl. Erlangen, 1839.

A powerful treatise, and shows to advantage the learning and talent of the writer, and of whose exertions much may still be expected in the field of civil law. He has examined the views laid down by Niebuhr, Savigny, Zimmerm, Suchta, and Walter, concerning the *Nexum*, with great judgment and erudition, and succeeded—it appears to us—in showing their futility. His own view on the subject is so simple and natural that it appears plausible already on that score

alone, when compared with the artificial argumentations and hypotheses of the former. We must refrain from entering into the details of the work, but are sure that no impartial critic will deny it the merit of at least a lucid and elaborate investigation on the subject in question.

OUTLINES OF PERIODICAL LITERATURE, RELATING TO THE NATURAL SCIENCES & PHILOSOPHY.

The Magazine of Natural History, and Journal of Zoology, Botany, Mineralogy, Geology, and Meteorology, conducted by EDWARD CHARLESWORTH, F.G.S. 8vo, London, 1839.

NO. XXVIII, APRIL, 1839.—First on the list for this month, are Madame Power's observations on the poult of the argonaut, with concluding remarks. In a continuation of Dr. Bachman's monograph on the genus *Sciurus*, five species are described; and, in the two next articles, you have a notice of a new species of *Rotalia* with eight figures, and a description of a new fossil *Avicula*, represented in a very distinct figure. Mr. Garner proceeds with his anatomy of the *Lamellibranchiate Conchiferous* animals, and treats of their digestive, circulating, and respiratory systems: his is followed by Mr. Hope with observations on forty-four of the *Lamellioorns* of Olivier, and by Mr. Pellerin's structural differences in the crania of the four species of British *Swans*, accompanied by the figure of a skull. Mr. Bird continues his artificial arrangements of the natural orders of British plants; and this is succeeded by Mr. Waterhouse's observations on the *Rodentia*, with a view to point out the groups as indicated by the cranial structure: eight figures give illustrations. From the pen of Dr. Bird you receive a letter on the application of Heliographic or photogenic drawing to botanical purposes, with an economic mode of preparing the paper. An editorial article points out the importance of Madame Power's experiments, the defects of the "Proceedings of the London Botanical Society," and the advantages of publishing illustrative plates in supplementary numbers. And the Short Communications relate to experiments on kyanised wood, ignes fatui, captures of eagles, appearance of the bat, the migration of the swifts, improvements in the microscope, and to an anomalous apterous insect inhabiting the *Spongia fluviatilis*, whose undulating motion it is supposed to produce.

NO. XXIX, MAY.—Extracts from the Proceedings of the Geological Society relating to the mammiferous remains of the Stonesfield oolitic strata, constitute the leading article of this number: this paper is long and interesting.

Professor Phillips gives a concise but most important biographical notice of William Smith, L.L.D., the "father of English geology." Dr. Bachman then describes another species, with two varieties, of the squirrels: Dr. Drummond notices and figures one Irish *Entosodon*: Mr. Hope characterizes a new species of *Lamia*: Mr. V. Wood distinguishes the four species of the genus *Lima*, and two species of the sub-genus *Limatula*, from the coralline crag: Mr. Long and Mr. Yarrell record the discovery of the nest and eggs of a common *Cross-bill* found in Surrey: Mr. Saunders points out the localities of forty plants growing about Kirtlington, and Mr. Charlesworth contributes an additional section to his illustrated zoological notices. Reviews of three books, a French, a German, and an English—Beale's on the Spermi-whale, with a plate—conduct you to the editorial article, having reference chiefly to the characters of the Stonesfield fossil jaws, and to the first specimen, by M. Louis Agassiz, of a regular system of piracy upon the literary productions of English naturalists. The Short Communications are intitled, Breeding of the Woodcock in England, Observations on the Iconographie des Insectes Coléoptères, and a new species of frog in yellow amber.

No. I. of *Natural-History Illustrations*, or supplementary plates to the Magazine of Natural History, contains four exquisitely-finished engravings. The first is a "living likeness" of William Smith, L.L.D., a portrait which ought to occupy a distinguished position in the library of every British geologist. For the second, you have a perfect figure of the magnificent *Lamia boisduvalii*, a new species from New Holland. The third plate represents the four species of *Lima* and two of the *Limatula*, in twenty-four figures; and, on the fourth, are exhibited the fossil remains of the *Hybodus delabecchei*, with admirable exactness and beauty. The *Natural-History Illustrations* possess extraordinary merit as mere examples of Art; as graphical aids to the development of science, their importance and execution cannot be too highly appreciated.

No. xxx, JUNE.—With farther observations on the history and classification of the *Marsupial* quadrupeds of New Holland by Mr. Ogilby, this number opens with its valuable stores. Mr. Hogg follows with a prefatory review of the classifications of *Amphibious* animals adopted by modern naturalists, and the first portion of an arrangement which he himself has constructed and prefers. Observations on the *Rodentia*, by Mr. Waterhouse, are continued and illustrated with ten figures of skulls and jaws. Mr. Ogilby describes and figures the frontal spine of a new species of *Hybodus* found in wealden clay; and Mr. Woods addresses a letter to the editor respecting the supposed frontal spine of *Hybodus* in the Bath museum. Dr. Moore's catalogue of the Malacostracous Crustacea of South Devon, is a methodical, exact, and important contribution to the natural history of that district. In another section of his anatomy of the *Lamellibranchiate Conchiferous* animals, Mr. Garner enlarges minutely on their *eseratory* system. A consorior epistle from "Philaethes" represents the Botanical Garden at Calcutta as having fallen into a state of lamentable degradation, and then Reviews of Hope's *Coleopterist's Manual* and of Halliday's *Hymenoptera Britannica*, bring you to the Short Communications, with the titles—Breeding of the *Cross-bill* in Gloucestershire and Surrey; carnivorous propensity of the *Squirrel*; and the distribution of the *Marsupial* animals.

The Naturalist ; illustrative of the Animal, Vegetable, and Mineral Kingdoms ; with portraits and memoirs of eminent naturalists, and engravings on wood ; edited by Neville Wood, Esq. ; royal 8vo, London, 1839.

No. XXXVII, MAY, 1839.

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. <i>T. B. Hall</i> ; Account of the Liverpool Botanic Garden. 2. <i>Sketches of European Ornithology</i>, taken from the Analyst. 3. <i>T. G. R. Rylands</i> ; Varieties of British Ferns, and Diagnostics of allied species. 4. <i>Prof. Meyen</i> ; the Digestive Apparatus of Infusoria. 5. <i>T. B. Hall</i> ; Habits of British Plants, and Derivations of their Latin names. | <ol style="list-style-type: none"> 6. <i>J. L. Levison</i> ; Comparative Phrenology. 7. <i>Correspondence</i>, with two figures. 8. <i>Notes on Various Topics</i>. 9. <i>Memoir of Professor Lindley</i>, with a portrait. 10. <i>Proceedings of Natural History Societies</i>. 11. <i>Extracts from Foreign Publications</i>. 12. <i>Reviews</i>, intelligence, and miscellanies. |
|--|--|

No. XXXVIII, JUNE, 1839.

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. <i>H. Buist</i> ; Report of Dr. Schomburgk's Expedition into British Guiana. 2. <i>Dr. Pöppig</i> ; Remarks on Tropical Seas. 3. <i>Habits of the Rat</i> ; from the Dublin Medical Press. 4. <i>T. B. Hall</i> ; Botanical Notes, chiefly referred to "Col. Velley's M.S." 5. <i>Sketches of European Ornithology</i>, taken from the Analyst. 6. <i>T. B. Hall</i> ; Habits of British | <ol style="list-style-type: none"> Plants, and the Derivations of their Latin names. 7. <i>Correspondence</i> ; the Black Scoter and Crested Grebe, the Podalirius a British butterfly, instance of three Pupæ in one cocoon. 8. <i>Proceedings of Natural-History Societies</i>. 9. <i>Extracts from foreign publications</i>. 10. <i>Reviews and Miscellanies</i>. 11. Biographical Notice of the late Dr. Latham. This number completes the fourth volume. |
|--|---|

The Foreign Monthly Review and Continental Literary Journal ; 8vo, London, 1839.

WHETHER the *Foreign Monthly Review* be appreciated by its intellectual or mechanical execution, the Journal certainly possesses extraordinary merit : the subjects are selected with exemplary judgment, and the articles composed with singular elegance, remarkable ability, and a wise as well as just discrimination : we arrange their titles, in English, under the attention of our readers.

No. I, MAY, 1839.

1. *German Almanac* of the Muses, for 1839.
2. *Ramon de la Sagra*; Elementary Education in Holland and Belgium.
3. *M. de Saint Hilaire*; Private Life of Napoleon.
4. *Dr. Julins*; Society and Manners in the United States.
5. *Literary Contemporaries* at Weimar, Bottigen, and Weiland.
6. *Dr. Förster*; Court and Cabinet of Augustus II, king of Poland.
7. *Dumas and Daurats*; A Fortnight's Visit to Mount Sinai.
8. *Droz*; Reign of Louis XVI, and the French Revolution.
9. *Count M. Dumas*; His Reminiscences, published by his son.
10. *J. M. Lappenberg*; History of England, volumes one and two.
11. *French Encyclopedia* for the Educated Classes; the original of Götthe's Faust.
12. *F. T. Silvatici*; Memoir on the Draining and Improvement of the Tuscan Marshes.
13. *Frans Palacky*; Literary Tour in Italy, in quest of Sources of Bohemian and Moravian history.
14. *Dumont D'Urville*; French Expedition towards the South Pole.
15. *German Popular Publications*; Solomon and Morolf, a most diverting history.
16. *Rous de Rochelle*; Pictorial Histories—the World—History and Description of all Nations—United States of America.
17. *Literary Intelligence*—France, Holland, Germany, Switzerland, Italy, Hungary, Wallachia, Turkey, and Russia.
18. *Lists of New Foreign Publications*, including upwards of three hundred articles, alphabetically arranged.

No. II, JUNE, 1839.

1. *Count de Torrens*; History of the Insurrection, War and Revolution in Spain.
2. *Dr. E. Eichwald*; Travels to the Caspian Sea and in the Caucasus.
3. *Almanac of the Muses*; the Lyric Poets of Germany; second article.
4. *Thiollet and Rous*; Collection of internal and external Architectural Decorations.
5. *Dr. Hermann Ulrici*; Shakspeare's Dramatic Art, and his relation to Calderon and Götthe.
6. *Literary Contemporaries* at Weimar; second article—Götthe.
7. *Bignon*; History of France under Napoleon, the second epoch; Russia in the East.
8. *Dr. Huber*; The English Universities, a preparatory work to the History of English Literature.
9. *Daguerre's Discovery*; the Photogenic or Heliographic Impressions.
10. *Dr. Gustav Klemm*; Manual of German Archaeology.
11. *G. Pierini*; Filiberta Madruzso, an historical tale.
12. *Martin Doisy*; Unpublished Manuscript of Louis XVIII, preceded by an Examination of his Political Life till the time of the Charter of 1814.
13. *Ludwig Tieck*; Collected Tales.
14. *Dr. G. L. Kreigh*; Report on District of the Ouquis in Bolivia.
15. *J. C. Kretschmer*; Military Life in the field and the camp.
16. *Nik. Josika*; Hungarian Novels and Tales.
17. *Literary Intelligence*, from the Continent.
18. *Lists of new Foreign Publications*, in April and May.

Annals of Natural History; or Magazine of Zoology, Botany, and Geology; conducted by Sir W. Jardine, Bart., P. J. Selby, Esq., Dr. Johnson, Sir W. J. Hooker, and Richard Taylor, F.L.S. 8vo. London, 1839, with Graphic Illustrations.

No. XVI, MAY, 1839.

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. <i>E. Forbes</i>; Two British species of Cydippe, with a plate. 2. <i>Dr. Arnott</i>; New and Rare Indian Plants. 3. <i>E. Beyrich</i>; Goniatites in the transition formations of the Rhine, with figures. 4. <i>Capt. Cautley</i>; Fossil Ruminant allied to Giraffidæ, in the Siwalik hills. 5. <i>F. Dujardin</i>; the Digestive Organs of Infusoria. 6. <i>F. Walker</i>; Descriptions of British Calcidites. | <ol style="list-style-type: none"> 7. <i>W. Thompson</i>; Effects of the Hurricane of January, on Birds and Fishes. 8. <i>Prof. Ehrenberg</i>; Meteoric Paper composed of Conserve and Infusoria. 9. <i>Bibliographical Notices</i>; five articles. 10. <i>Proceedings</i> of Learned Societies, the Linnæan, Zoological, and Geological. 11. <i>Miscellanies</i>, and Meteorological Observations. |
|--|--|

No. XVII, JUNE, 1839.

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. <i>A. H. Haliday</i>; Generic Distribution of British Hydromyzidæ. 2. <i>C. B. Babington</i>; The Ranunculus aquatilis of Smith. 3. <i>R. Patterson</i>; Common Limpet considered as food. 4. <i>M. Lund</i>; Fossil Mammalia discovered in Brazil. 5. <i>E. Forbes</i>; Botanical Excursion to the mountains of Carniola. 6. <i>Sir P. G. Egerton</i>; The Wild Cattle at Bishops Auckland. 7. <i>L. Jenyns</i>; Three undescribed species of Cimex, with a plate. 8. <i>A. Cunningham</i>; Botany of New | <p>Zealand; fourteen species characterized.</p> <ol style="list-style-type: none"> 9. <i>Information</i> respecting Mr. Gardner's Travels in Brazil. 10. <i>Bibliographical Notices</i>; three articles. 11. <i>Proceedings</i> of the Linnæan, Botanical, Dublin Natural History, West Yorkshire Natural History, and Zoological Societies, and the Royal Irish Academy. 12. <i>Miscellanies</i>; six articles. 13. <i>Meteorological</i> Tables and Observations. |
|--|--|

The London and Edinburgh Philosophical Magazine and Journal of Science; conducted by Sir David Brewster, F.R.S., Richard Taylor, F.G.S., and Richard Phillips, F.R.S. 8vo, London, 1839.

No. XC., MAY, 1839.

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. <i>Mr. Tovey</i>; The Elliptical Polarization produced by Quartz. 2. <i>Dr. G. Bird</i>; Products obtained by the re-action of Nitric Acid on Alcohol. | <ol style="list-style-type: none"> 3. <i>Prof. Pléau</i>; Theory of Visual Appearances arising from the contemplation of Coloured Objects. 4. <i>Prof. Johnston</i>; The Constitution of Resins. |
|--|--|

5. *J. Ivory* ; Theory of the Astronomical Refractions : the Bakerian lecture.
6. *Prof. Phillips* ; Classification of Devonshire Strata.
7. *Sedgwick and Murchison* ; Supplementary Remarks on the Devonian System of Rocks.
8. *D. Williams* ; Classification of Devonshire Geological Formations
9. *Proceedings* of the Royal, Linnæan, Geological and Cambridge Philosophical societies, and of the Royal Academy of Sciences at Paris.
10. *Intelligence and Miscellanies*, in thirteen articles.
11. *Meteorological Society*, Observations and Tables.

No. XCI., JUNE, 1839.

1. *C. T. Coathupe* ; Products of Respiration at different times of the day.
2. *Thomson and Richardson* ; Decomposition of Amygdalium by Emulsion.
3. *W. Trull* ; Effects of Light and Air in restoring the Colours of the Raphael Tapestries.
4. *Prof. Forbes* ; The Colours of the Atmosphere.
5. *Dr. C. T. Beke* ; Alluvia of Babylonia and Chaldaea.
6. *H. Prater* ; Anti-inflammable and Anti-dry-rot powers of the Subcarbonate of Soda and other salts.
7. *Prof. Plateau* ; Visual Appearances arising from contemplation of Coloured Objects ; a continuation.
8. *Polarized Condition of Platina Electrodes*, and Theory of Secondary Piles.
9. *Proceedings of Societies* ; the Geological, Linnæan, and Edinburgh Society of Arts.
10. *Notices* respecting New Books ; three articles.
11. *Intelligence and Miscellanies* ;— nine articles.
12. *Meteorological Table and Observations*. This and the preceding number contain several "miscellanies" relating to HELIOGRAPHY, or *photographic* drawing.

*. The October number of "THE ANALYST" will contain an Analytical Account of the "Annales des Sciences Naturelles," for the present year.

AN ESSAY ON THE FLUCTUATIONS IN THE SUPPLIES OF GOLD,

WITH RELATION TO PROBLEMS OF POLITICAL ECONOMY.

BY ALEXANDER VON HUMBOLDT.

It is an ancient remark of Herodotus (iii., 106) that in the unequal distribution of the goods and treasures of the earth, the fairest productions have been imparted to its extremities. This observation was not founded merely on the gloomy feeling (so characteristic of humanity) that happiness dwells far from us, but it expressed as well the fact that, by means of commercial intercourse, the Greeks, as inhabitants of the temperate zone, were dependent on distant lands for gold and spices, amber and tin. So that when, by means of the commerce of the Phœnicians, of the Edomites on the Gulf of Acaba, of Egypt under the Ptolemies and Romans, the long-concealed coasts of Southern Asia came gradually to be explored, the productions of the warmer latitudes were received more direct from their native soil; and in the fertile imagination of man the metallic treasures of the earth were driven back further and further towards the east. Twice have the same people (the Arabians), during the epoch so important for commerce, namely, the æras of the Lagidæ and the Cæsars, as well as at the conclusion of the fifteenth century—the period of the Portuguese discoveries—pointed out to the western nations the route to India. Ophir (the Dorado of Solomon) extended to the eastward of the Ganges. There, also, was supposed to be situated Chrysé, which so long engaged the attention of the travellers of the middle ages, and which was considered, at one time, as an island, at another, as part of the Golden Chersonesus. The quantities of gold which, according to John Crawford, Borneo and Sumatra bring into circulation, even at the present day, explain the ancient celebrity of those regions. Near to Chrysé (the land of gold, according to the ideas of a systematizing geography) must symmetrically be situated a silver island (Argyré), in order to unite, as it were, the two precious metals—the wealth of Ophir and the Iberian Tartessus. The geography of the middle ages reflected, under various forms, the geographical fables of classical antiquity. In the works of the Arabians, Edrisi and Bahai, we find mentioned, at the extremity of the Indian Ocean, an island (Salahet) possessing silver sands; and near it

Saila (not to be confounded with Ceylon or Serendib), where dogs and apes were said to wear golden collars.

In determining, however, the peculiar region of gold, and of all the precious productions of the earth, the idea of remote distance was mixed up with that of tropical heat. "So long," writes, in 1495, Moesen Taime Teener, a Catalonian lapidary, to Christopher Columbus, "as your excellency does not find black men, you must not look for great things, real treasures, such as spices, diamonds, and gold." This letter was recently found in a book printed at Barcelona in 1545, and bearing the singular title of "*Sentencias Catholicas del Divo Poeta Dante.*" Yet the gold productiveness of the Ural mountains, which extend northwards to where the snow scarcely thaws during the summer months, and the diamonds, which (during my Siberian expedition, made at the request of the Emperor Nicholas in 1829) were discovered by two of my companions on the European declivity of the Ural, near to the 60th deg. of lat., do not bear out the connexion of gold and diamonds with tropical heat and coloured men. Christopher Columbus, who ascribes a moral and religious value to gold, "because," as he says, "whoever possesses it obtains what he will in this world, nay, even (by the payment of masses) brings many souls into paradise"—Christopher Columbus was entirely devoted to the system of the lapidary Teener. He looked for Zipangu (Japan), which was given out as the gold-island, Chrysé; and while sailing (14th of November, 1492) along the coasts of Cuba, which he took for part of the continent of Eastern Asia (Cathay), he writes, in his log-book, "from the great heat which I suffer, the country must be rich in gold." Thus did false analogies cause to be forgotten what classical antiquity had recorded of the metallic treasures of the Massagetæ and Arimaspi, in the extreme north of Europe: I say of Europe, for the barren table land of Northern Asia, the modern Siberia, with its pine forests, was considered as a wearisome continuation of the Belgian, Baltic, and Sarmatian plains.

If we cast a glance over the history of commercial intercourse in Europe, we shall find the richest gold mines of ancient times in Asia. From the termination of the middle ages, and for three centuries later, they belong to the new world. At the present day, and since the commencement of the nineteenth century, the most abundant supplies are again found in Asia, although in different zones of that continent. This change in the direction of the current, this compensation presented by accidental discoveries in the north, when the supply of gold suddenly ceases in the south, is deserving of serious consideration, of

examination according to numerical data ; for in political as well as in the observation of natural phenomena, numbers are ever decisive ; they are the last, inexorable judges, in the much-disputed questions of political economy.

We learn from the acute researches of Bökh^s* how, on the opening of the east by means of the Persian war, and the great Macedonian expedition to further Asia, gold gradually accumulated among the Greeks of Europe ; so that, in the age of Demosthenes, for instance, the precious metals were of nearly five times less value than in that of Solon. The stream flowed at that time from east to west, and the influx of gold was so abundant that the relation of gold to silver, which in the time of Herodotus was as 1—13, on the death of Alexander, and for more than one hundred years afterwards, stood as 1—10.† The less general the commercial relations of the ancient world, the greater and more sudden the changes the relative value of gold and silver must necessarily undergo. Thus, we find in Rome that, owing to the local accumulation of one of the precious metals, shortly after the conquest of Syracuse, the relation of gold to silver as 1—17‡ ; while under Julius Cæsar it fell, for a time, to as low as 1—8¼‡. The more inconsiderable the quantity of bullion already existing in a country, the more easily, by means of influx from without, may these extraordinary fluctuations be brought about. In the modern world, the universality and rapidity of communication, which restores the equilibrium, as well as the amount of the accumulated masses of gold and silver already existing, tend to render still more stable the relative value of metals. After the revolution in Spanish America the annual amount was, for several years, reduced to one-third ; still the inconsiderable oscillations here and there remarkable are not to be attributed to this cause. It is quite otherwise as to the relation of silver to the so little accumulated, and therefore so unequally disseminated metal, platina.

Of statistical data, shewing, like those of modern days, the productiveness of entire countries, we find nothing among the ancients. The nature of their public administration did not admit of that control which, in more recent times, the over-refined fiscal system of the Arabians has imparted to the states of southern and western Europe. A datum like that given by Pliny (xii., 18), according to which

* *Political Economy of the Athenians.*

† See Letronne's learned rectification of the monetary hypotheses of Garnier, *Considerations générales sur l'Évaluation des Monnaies Grecques et Romaines*, p. 112 ; 1817.

the commerce with India, Serica, and Yemen, absorbed annually one hundred millions of sesterces in precious metals—that is, according to Letronne, for the monetary value of that time a weight of 33,000 marks of silver, equal to about £70,000 sterling (only half the annual silver production of the Saxon Erz mountains), remains isolated and problematical. Where general results are wanting, numerical examples of the partial metallic productiveness of certain mountainous countries would be the more valuable, as we should be enabled to compare them with the modern produce of celebrated mining districts, weight with weight in the absolute sense, without relation to the difficult consideration of gold as the measure of value of a given quantity of cereals. Treasures amassed by princes, the result of conquest or of long-continued extortion, are only evidence of what has been accumulated in extensive regions during an unknown number of ages. Results like these may be compared with the data which our staticians venture to put forth concerning the masses of the precious metals existing in a state at a given period. If Cyrus, according to Pliny (xxxiii., 15), amassed by the conquest of Asia 34,000 lbs. in unwrought gold, without reckoning that wrought into vessels, still it is scarcely to be compared with two years produce of the Ural. On the other hand, Appian, on the authority of public records, estimates the treasure of Ptolomæus Philadelphus at 740,000 talents, that is, according as we calculate by the Egyptian or smaller Ptolemæan talent, 1017 or 254 millions of Prussian dollars. “Such things,” says the celebrated author of the *Political Economy of the Athenians*, “sound like fable, but I venture not to question their credibility. There was among this treasure much wrought silver and gold. The countries were completely exhausted; taxes and contributions were collected by rapacious prætors. The revenues of Cælesyria, Phœnicia, Judea, and Samaria, alone were leased by Ptolomæus Evergetes for 8,000 talents, whilst a Jew purchased them for double that sum.” Jacob, also, in his excellent work, *Historical Inquiry on Precious Metals*, published at the request of Huskisson, confirms the data of our celebrated philologist. The above higher valuation will come near the present circulating medium of France and Belgium, the lower one to that of England. According to Strabo, Alexander collected in Ekbatana eighteen myriads of talents. We must not, however, lose sight of the fact, that while at the present day the precious metals are proportionately distributed over extensive districts, and among a numerous population, they were at that time concentrated on a few points, or in the coffers of princes.

That the golden treasures of the east, by which the western world was inundated, flowed from the interior of Asia, north eastward from Ladakh, from the upper course of the Oxus, from Bactria and the eastern Satrapies of Persia, there cannot exist a doubt; still it is easier to point out the direction of the stream, than its particular sources and their relative productiveness. The scene of the fabulous gold-seeking ants must be sought for far from the griffins of the Arimaspi. The former story would seem to belong to the table land of Raschgar and Aksu, between the parallel chains of the Celestial Mountain and the Kuenlun, where the river Tarim flows into the Lop. We shall again have occasion to recur to the more northern Arimaspi when we come to notice the gold masses of the Ural, lying immediately under the surface of the ground. The fame of Indian wealth resounded in oft mistaken echoes as far as Persia. Ctesias, of the tribe of the Asclepiads, physician to the king Artaxerxes Mnemon, without appearing to be aware of it, under the figure of a gold spring, most distinctly describes a melting furnace, out of which the liquid metal flows into earthen moulds. Nearer to the Greeks were Lydia, and on the rivers which have their sources in the Tmolus, the gold-producing countries of Phrygia and Colchis. The nature of the quickly exhausted beds of gold sand (gold washings), renders it intelligible to the practical miner why so many of the above-named and recently revisited countries have appeared to the traveller poor in gold. How easy would it be, were we to visit at the present day the ravines and torrent beds of Cuba and St. Domingo, or even the coasts of Veragua, in ignorance of the existing historical testimony, to doubt of the rich booty afforded by those districts at the conclusion of the fifteenth century? More durable, when not disturbed by external relations, is the subterraneous mining in permanent strata of gold ore; precisely because the entire bed cannot be discovered at once, as well as because, by the process of mining by galleries, the mountain is only laid open by degrees, thus affording a more permanent employment to human activity.

How many of the forty gold washings so carefully described by Strabo could be recognised at the present day? This remark, founded on mining experience and analogy, is the more deserving of place here, now that ignorant scepticism so eagerly attacks the traditions of antiquity. That part of Europe known to the Greeks was as far inferior to Asia in metallic riches, as the whole European continent has proved to be, in recent times, to the New World.

The relative productiveness of Europe and America in gold at the

commencement of the nineteenth century, the period when the mines of the Spanish colonies were wrought with the greatest activity, was as 1—13; in silver as 1—15. To me it even appears probable that during the Alexandrian and Ptolemæan periods, the proportion would have been still more unfavourable for Europe, especially in gold, could statistical data of this nature be obtained. In Greece itself, it is true, that besides the originally rich silver mines of Laurion, the quantity of gold found in Thessaly, as well as in the mountains bordering on Macedonia and Thrace, was considerable. Iberia, also was to the Phœnicians and Carthaginians not merely a country of silver. Tarshish and Ophir (the latter either Arabia or the eastern coasts of Africa, or rather, according to Heering, the general name for rich southern countries) were the destinations of the united Hiro-Solomonian fleets. Although, in the metallic abundance of Spain, silver from Bœtica and the neighbourhood of New Carthage was the chief object of foreign commerce, yet Galicia, Lusitania, and especially Asturias, produced, during many years, 20,000 lbs. of gold; that is to say, almost as much as Brazil during its most flourishing period. It is not surprising, therefore, that the Spanish peninsula acquired, among the Phœnicians and Carthaginians, the reputation of a western El Dorado. It is certain that in many districts which at present discover but faint traces of metallic formation, the earth was at some former period covered, near the surface, with beds of gold sand, or traversed by solid socks containing fragments of gold ore. The local importance of those mines in southern Europe is not to be denied, though, in comparison with Asia, their productiveness in gold must be deemed insignificant. The latter continent remained long the chief source of metallic wealth; and the direction of the current of gold, as far as Europe is concerned, must be considered as from east to west.

It was Asia itself, however, or more properly the rumours spread by travellers, during the middle ages, of the incalculable treasures of Japan and the Southern Archipelago, which caused a sudden change in the direction of the metallic current. America was discovered, not (as was so long falsely pretended) because Columbus *predicted* another continent, but because he sought by the west a nearer way to the gold mines of Japan and the spice countries in the south-east of Asia. "The greatest geographical error (the notion of the proximity of Spain to Asia) led to the greatest geographical discovery." Christopher Columbus and Amerigo Vespucci both died in the firm conviction that they had touched upon Eastern Asia—the peninsula

of the Ganges. The reputation of having discovered a new continent, therefore, could give rise to no dispute between them. In Cuba, Columbus wished to deliver up the credentials of his monarch to the Grand Khan of the Moguls. He mistook that island for Mangi, the southern part of Cathay (China), and there expected to find the celestial city, Quinsay (now Hang-tschou-fu), described by Marco Polo. "The island of Hispaniola" (Hayti), writes Columbus to the Pope Alexander the Sixth, "is Tarschisch, Ophir, and Zipangu. In my second voyage I have discovered 140 islands and 333 miles of the continent of Asia (de la tierra firme de Asia)." This West-Indian Japan shortly produced golden pebbles (*pepitas de oro*) of eight, ten, and even twenty pounds weight. The newly-discovered America now became the chief source of the precious metals. The fresh stream, flowing from west to east, shortly traversed Europe, since, owing to the increasing intercourse created by doubling the Cape of Good Hope, a more considerable value was required in return for the spices, silks, and colouring materials of southern and eastern Asia. Before the discovery of the silver mines of Tasco (1522), in the western declivity of the Mexican Cordilleras, America furnished gold only; and Queen Isabella, of Castile, saw herself compelled considerably to alter the legal relation of the precious metals to each other. The early but hitherto little noticed edict of Medina may be explained by this circumstance, and by the accumulation of gold on a few points in Europe. I have attempted to prove, in another place, that from 1492 to 1500 the entire importation of gold from the then discovered regions of the New World, scarcely afforded an yearly average of 2000 marks.

Pope Alexander the Sixth, who conceived he had presented to the Spaniards one-half of the globe, received in return, from Ferdinand the Catholic, a quantity of golden pebbles from Hayti, for the gilding of the entablature of the basilic of Santa Maria Maggiore, "as the first-fruits of the newly-discovered country." An inscription on the metal mentions, "*quod primo Catholici reges ex India receperant.*" So great was at that time the activity of the Spanish government, that so early as 1425, as we learn from the testimony of the historian Munoy, a miner (Paolo Belvio) was sent with a provision of quicksilver to Hayti, in order to expedite the gold washing by means of amalgamation. It is very curious to read, in a newly-discovered part of the geography of the sherif Edrisi, recently published, "that the negroes in the interior of Western Africa, as well as the inhabitants of the fertile settlement of Wadi el Alaki (between Abyssinia,

Bodja, and Nubia), washed gold by means of quicksilver." The Nubian geographer of the middle of the twelfth century speaks of it as a thing long known. During the ages of classical antiquity, we find mention of quicksilver having been very generally used for the purpose of detaching the gold from the threads of old fringe, never, however, of a technical application of it, on a large scale, in those processes for purifying the precious metals which have been so circumstantially described to us by ancient writers.

The relative value of gold and silver is at all times modified rather by the discovery of new than the drying up of old sources. Thus, for the second time since the discovery of the great Antilles, the price of gold rose about the middle of the sixteenth century, on the opening of the rich silver mines of Potosi and Zacatecas in Peru and North Mexico. The result of my very careful enquiries shews that, up to the opening of the Brazilian gold washings at the commencement of the eighteenth century, the importation of American gold bore a relation to that of silver, weight for weight, as 1 to 65. At the present day, this proportion, if we embrace in one view the European commerce in metals with all parts of the world, is scarcely more than 1 to 47. Such, at least, is the result of a comparison of the masses of both metals contemporaneously existing in Europe in a state of coinage. The data contained in the otherwise excellent work of Adam Smith, as well as the greater part of the numerical results therein given, are extremely incorrect, in the above-named proportion, by more than the half. Among the civilized, and consequently the European nations carrying on immediate intercourse, the relative value of gold and silver fluctuated, during the first hundred years subsequent to the discovery of the new continent, between 1—10 $\frac{1}{2}$ and 1—12; in the last two centuries between 1—14 and 1—16. This fluctuation by no means exclusively depends upon the relative quantities of the metals annually obtained from the bowels of the earth. The relative value of the two metals is dependent on a variety of causes; for example—the expenses of production, the demand for consumption, and conversion into trinkets and other metallic wares. So many different causes acting at once, as well as the present facility of intercourse, and the enormous masses of precious metal already accumulated in Europe, render any considerable or continued variation in the relative value of gold and silver impossible. Experience has shewn this on any sudden interruptions of the production—such as the outbreak of the revolution in Spanish America, or the immoderate consumption of the precious

metals by one of the more considerable mints. In England, for instance, in the ten years from 1817 to 1827, more than 1,294,000 marks of gold were converted into money, and yet this monopoly of gold only raised the proportion of it to silver in London from $1-14\frac{27}{100}$ to $1-15\frac{60}{100}$. Since then, the exchangeable value of gold, as compared with silver, has undergone but little depression; for at the conclusion of the year 1837 a pound of gold might be purchased in London for $15\frac{83}{100}$ lbs. silver. We shall shortly furnish numerical data for the solution of the question as to what changes may be attributed to the combined effect of the Ural and North American mining.

The quantity of precious metals imported into Europe, from the discovery of America until the breaking out of the Mexican Revolution, was 10,400,000 Castilian marks (2,381,600 kilogrammes) of gold, and 533,700,000 marks (or 122,217,300 kil.) of silver; their united value amounting to 5,940 millions of piastres, of 4s. 4d. each.

The silver obtained, during this period, from the American soil, is calculated, in this valuation, at the standard of 0.903 for the piastre, which, for 122,217,300 kils. piastre silver, will give but 110,362,222 kils. pure silver; which would form a ball of $83\frac{7}{10}$ Parisian feet in diameter. A similar reduction to form and dimensions I consider as allowable, as analogous graphical descriptions. If we compare the result of 318 years produce of Spanish America with that of one year's production of iron in a single country of Europe, we shall have, according to the datum of my friend, the celebrated geognost, Dechen, a ball of iron for Great Britain of 148, for France 111, for the Prussian monarchy of 76, Parisian feet in diameter. So great is the difference in quantity of the two metals, silver and iron, in that part of the earth's superficies accessible to man.

Whilst the stream of gold and silver flowed from east to west, Spain was merely the channel of communication. But little of it remained in the country, still less in the coffers of the king.* Of

* "Ferdinand the catholic," writes his admirer and friend, Anghiera, a few days after that great monarch's decease, "was so poor that it was difficult to procure money to furnish decent clothing for the servants at his funeral. We give the remarkable passage from the letter to the Bishop of Tuy:—*"Madrilegium villulam Regis tibi alias descripsi. Tot regnorum dominus, totque palmarum cumulis ornatus, christianæ religionis amplificator et prostrator hostium, Rex in rusticana oblit cassi, et pauper contra hominum*

Charles the Fifth's pecuniary difficulties, Ranke has treated in his work on Spanish finance. The talented historian has, by means of fresh documents, enlarged and confirmed my official proofs of the inconsiderable quantity of precious metals furnished by the American mines and the so-styled Inca treasures, up to the year 1545.

A more intimate acquaintance with the history of the metallic productiveness, or gradual discovery of rich and considerable beds of ore in the New World, enables us to explain why the depreciation in the value of the precious metals, or (what is the same thing) the increase in the price of grain and other necessities, first began to be felt towards the middle of the sixteenth century, and more especially between 1570 and 1595. The abundance of silver from the mines of Tasco, Zacatecas, and Pachuca, in New Spain, of Potosi, Porco, and Oruro, in the Peruvian Andes, then first began to be regularly diffused throughout Europe, and effect a material alteration in the price of wheat, wool, and manufactured wares. The actual opening and working of the mines of Potosi, by the Spanish conquistadores, took place in the year 1545; and the famous sermon preached by Latimer before Edward the Sixth, in which he expresses his anger at the increasing price of all the necessities of life, is of the 17th of January, 1548. The English corn laws, between 1554 and 1688, indicate the accumulation of the precious metals still better, perhaps, than the prices of grain collected by Fleetwood, Dupré de St. Maur, Garnier, and Lloyd. It is well known that the importation of wheat is only allowed when the price of a given measure has reached a certain standard prescribed by the law. Now, in the reign of Queen Mary (1554), this limit was six shillings per quarter; under Elizabeth (1593), about twenty; and in the year 1604, under James the First, more than twenty-six. These numerical data are undoubtedly of great value; still considerable caution is required in the interpretation of them, since the problem of the prices of corn, as well as of prices in general, is a very complicated one; and varying theoretical views, the influence of the landowners, as well as the unequal local accumulation of money and wares, produce their effects on the legislation of every period. Besides, the atmospheric changes (the mean warmth of the spring and summer months) which affect the cultivation of cereals, do not embrace at the same moment the entire agri-

opinionem obiit, vix ad funeris pompam et paucis familiaribus præbendis vestes pullatas, pecuniæ apud eum, neque alibi congestæ, repertæ sunt, quod nemo unquam de vivente judicavit."

cultural Europe. An unequal increase in population, and the consequently increasing intercourse, multiply the demand for metals. In the standard which we seek and think to find in the fluctuating prices of grain, we have to deal with two contemporaneously fluctuating quantities. The increased price of grain, even for a particular country, no more determines the relative increase of gold, than it informs us concerning the state of weather and the quantity of sunbeams. Data which should embrace a considerable portion of Europe contemporaneously, are nowhere to be found; and careful enquiries have shewn that in the north of Italy the advance in the prices of grain, wine, and oil, from the fifteenth to the eighteenth century, was much less considerable than we might have reasonably concluded from what is known to us of England, France, and Spain, in which latter countries the prices of grain, since the discovery of America, have advanced four and even six-fold. Here it may not be superfluous to insert a numerical result, based on the average prices of fourteen years for the whole of the Prussian states, and drawn out with the greatest industry, at my request, by the Counsellor Hoffmann. In the year 1838, when for a pound of gold you might purchase, in Berlin, 15 $\frac{2}{3}$ lb. of pure silver, 1611 lb. of copper, and nearly 9700 lb. of iron, the pound of gold, according to the averages of 1816 to 1829, and 1824 to 1837, is exactly equal, in value, to 20,794 lb. of wheat, 27,655 lb. of rye, 31,717 lb. barley, and 32,626 lb. of oats.

The apprehensions respecting the diminished importation of gold and silver from the New World—caused by the appearance of the important, but in Germany not sufficiently appreciated, work of Jacob on precious metals—have not been realized. The depressed condition of the metallic production from 1809 to 1826, notwithstanding the unsettled state of the liberated Spanish America, has revived to three-fourths of what it was at the period when I quitted those countries. In Mexico, in fact, according to the latest intelligence, for which I am indebted to the active charge d'affaires of Prussia, Mr. von Gerolt, the produce had risen to twenty or twenty-two millions of piastres, to which, besides Zacatecas, the newly-opened mines of Fresnillo, Chihuahua, and Sonora, had principally contributed. During the last peaceable period of Spanish dominion, I could not estimate the mean produce of the Mexican mines at more than twenty-three millions of piastres. The control was then easier, as there existed only a central mining commission, and severe laws restricted the commerce to a more limited number of ports. The greatest activity which at any time prevailed was in the central mint

of Mexico, which, from 1690 to 1803, furnished exactly 1353 millions of piastres in inland gold and silver; but, from the discovery of New Spain to the liberation of the country, probably 2,028 millions—that is, two-fifths of the entire amount of precious metals which the whole of America has poured into the old continent—was furnished during this period.

The assertions so often made, in consequence of unsuccessful speculations, concerning the exhaustion of the Mexican mines, are disproved as well by the geological formation of the country, as by the most recent experience. The mint of Zacatecas alone, during the unsettled period from 1811 to 1833, coined more than 66,332,000 piastres, and in each of the last eleven years (1822 to 1833) between four and five millions of piastres.

1829	...	...	...	...	4,506,180	piastres
1830	...	...	...	...	5,189,902	"
1831	...	...	...	...	4,469,450	"
1832	...	...	...	...	5,012,000	"
1833	...	...	...	...	5,720,000	"

In Zacatecas, a single gallery—the Veta Grande—which had been wrought since the sixteenth century, and up to 1738 frequently furnished as many as three million piastres in a year, has brought the following quantities into circulation:—

1828	...	...	...	...	117,268	marks of silver
1829	...	...	...	...	235,741	"
1830	..	...	...	...	279,288	"
1831	...	...	...	...	272,095	"
1832	...	...	...	...	258,498	"
1833	...	...	...	...	209,192	"

It is true that Guanarato, on the other hand, which, even in my day, furnished annually 755,000 marks of silver, has of late years fallen to less than half. The produce was,

1829	.....	of gold,	852	marks;	...	.....	of silver,	260,494	marks
1830	.....	"	1058	"	.....	.....	"	284,386	"
1831	.....	"	622	"	.....	.....	"	258,500	"
1832	.....	"	1451	"	.....	.....	"	300,612	"
1833	.....	"	1144	"	.....	.....	"	316,024	"

And should those highly-favoured regions ever enjoy the blessings of peace, the extended cultivation of the soil must necessarily lay open fresh strata. In what region of the globe besides, are we enabled to produce instances of a similar productiveness in silver? We must not forget that near Tombrerete, where mines were opened as early as 1555, the family of Fagoaga (Marqués del Apartado), within the space of five months, in an extent of ninety-six feet in length, obtained from falls of red ore of the Veta Negra, a clear profit of four millions of piastres; and in the mining district of Catorce, an ecclesiastic (Juan Floreo), between 1781 and 1783, from the shaft called, by the common people, "the Purse of God the Father" (la Bolsa de Dios Padre), obtained three and a half millions of piastres.

The quantity of gold produced in Spanish and Portuguese America has diminished considerably more than that of silver; this diminution, however, must be dated much further back than the outbreak of the political revolutions in the tropical countries. I have already pointed out, in another place, how erroneous were our impressions in Europe, up to the commencement of the present century, concerning the continuance of the productiveness of the Brazilian gold washing, and how far we had confounded its flourishing days with its more recent condition. The report (so important for the gold trade) of the Bullion committee first threw some light on this subject. I am indebted for the most authentic details to the communications of the late director general of mines, Freiherr von Eschwege. Jacob's work on the precious metals contains merely some trifling additions. From 1752 to 1761 the gold produce of Minas Geraes varied from 6,400 to 8,600 kils. This production is certainly considerable, and far exceeding that of the Ural and the Altai at the present day; but we must recollect that, in 1804, Spanish America furnished nearly 10,400 kils. of gold, viz. :—

New Grenada	...	...	...	...	...	4,700	kilogrammes.
Chili	...	...	...	...	...	2,800	"
Mexico	...	...	...	...	...	1,600	"
Peru	...	...	...	...	...	780	"
Buenos Ayres	...	...	...	...	...	500	"
							10,380
							kilogrammes.

The production of Minas Geraes had already fallen, in the intermediate 1785—1794, to 3,300 kils; between 1818 and 1820, to

428 kils. This is in accordance with the account furnished by the Chevalier de Schaffer, according to which, in the year 1822, only twenty-four arrobas (350 kils.) were delivered to the smelting furnaces of Villarica. Since that time, owing to the exertions of some English companies, the Brazilian gold mining appears to have somewhat recovered itself. The decline, however, of the gold washing, is rather to be attributed to the disposition to cultivate colonial produce, favoured as it is by the continued infamous importation of slaves from Africa, than to the exhaustion of the beds of ore. Owing to the enormous amount of smuggling at present carried on in the Brazils, it were to be wished that some native thoroughly acquainted with the circumstances of the country would give himself the trouble to discover the annual amount of the gold produced since 1822.

It is a remarkable circumstance in the history of mining carried on by Europeans, that, since the supplies of gold from the Brazils have so far diminished, those of Northern Asia and (though but momentarily) of the southern districts of the United States, have attained an unexpected degree of importance. The mountain chain of the Ural is found to produce gold for nearly 17° lon. Though the Ural, in the years 1821 and 1822, only furnished 27 to 28 pud (440 to 456 kils.) gold, yet the produce of the gold sand gradually rose, in the three following years (1823, 1824, and 1825), to 105, 206, and 237 pud. According to the manuscript communication made me by the Russian minister of finance, Count Cancrien, "Return of the Precious Metals obtained in the Russian Empire, and refined in the Mint of St. Petersburg," the amount of pure gold was, in

1828	...	...	...	...	...	209 pud, and 28½a.
1829	...	...	...	...	...	289 " 25
1830	...	...	...	...	...	347 " 27
1831	...	...	...	...	...	352 " 2
1832	...	...	...	...	...	380 " 31
1833	...	...	...	...	...	368 " 27
1834	...	...	...	...	...	363 " 10

At the period of the expedition which I undertook into Northern Asia, at the request of the Emperor Nicholas, the gold washing was confined to the mountains on the European extremities of the Ural. The Altai [in Mongolisch, the golden mountain] furnished merely the inconsiderable quantity (about 1,900 marks) of gold which could be obtained from the silver ore of the rich mines of Smeinogorsk, Ridderski, and Syrianowske. Since 1834, however, the industry of the

gold washers in this central part of Siberia has been unexpectedly rewarded. A bed of gold sand has been discovered, precisely similar to those on the declivity of the Ural. The house of Popof, so deservedly celebrated for the encouragement it has afforded for improving the intercourse in the interior of Asia, has here also set a laudable example. Among the 398 pud (27,884 marks) of gold, produced by the entire Russian Empire in 1836, 293 pud, 26lbs., were from the Ural, and 104 pud, 15lbs., from the Altai. In the following year the produce of eastern Siberia had already so much increased that the Altai furnished 130 pud, the Ural (from crown and private washings), 309 pud, wash gold. If to these amounts we add 30 pud gold, contained in the ore found in the solid rocks of the Altai, it will give, for the entire produce of Russian gold for the year 1837, precisely 469 pud, or 7,644 kils. The gold washing in the Ural is, therefore, in a very gradual decline; the Altai, however, contributes so much to the general mass, that its produce, as compared with that of the Ural, is already as 4—9½.

Concerning the actual situation of the gold sands in the Altai, the most recent information has been communicated by a distinguished geologist, my former travelling companion in the southern Ural, Mr. von Helmersen. The wash gold, which for some years past has been obtained in constantly increasing quantities in the eastern part of the Tunksch district, does not belong to the great mountain chain itself, which we call the Altaian ore mountain, which Ledebour, Bunge, and Gebler, have explored, and in which the mountain Belacha, with its inaccessible snow peaks majestically raises itself to the height of the Wetterhorn, or the Peak of Teneriffe. The situation of the golden sands is observable on both, but especially in the eastern side of a small mountain chain, which the Altai, in its course from east to west, sends out in the meridian of the Telezkischen Lake, and extends into the parallel of Tonsk. "On the maps," says my friend, Mr. von Helmersen, "this mountain branch, producing wash gold, is distinguished by the names of the Abakauskisch, Kusneychriach, and Alatau mountains. In direction, internal composition, and formation, it possesses the most striking similarity to the Ural; it is, in fact, a repetition of it, only at less considerable length. The analogy goes so far that here, also, the eastern declivity is rich, the western much poorer, in gold. As it is precisely this western declivity which has been reserved by the crown, so they are almost entirely private adventurers who have profited by the productiveness of the Alatau (this branch of the Ural running towards the

north)." The importance of these observations of Mr. von Helmersen cannot escape such geognosts as are familiar with my enquiries concerning the mountain system of the interior of Asia, and with the original views of Elie de Beaumont concerning parallelism and relative antiquity of the different mountain chains. I have not myself seen the northern beds of the Altaian gold sands, as the direction of my journey was from Tobolsk, by Tara, through the Barakinskish steppes, to the western and southern Altai, and from thence to the Chinese frontier posts Chunimailachu, in the province Ili, northward from Lake Saysan.

The wash-gold of the Altai contains more silver than the gold of the Ural. The Siberian merchants, powerfully seconded by the imperial mining department, have now established winter washing also; and the working this new branch of Asiatic industry is the more remarkable and satisfactory in that the workmen consist of well-paid volunteers. According to recent accounts, for which I am indebted to the minister of finance, Mr. von Cancrien, rich sand-beds have been discovered in the Salairskish chain of mountains, as well as on the river Biriusa, which separates the governments of Teniseisk and Irkutik. For the whole of Siberia, 240 licenses (permission to work the sand-beds containing gold), have been granted.

Such, therefore, is the importance which the influx from the eastward has attained in modern times (the principal object of the present enquiry, being to point out the fluctuations of channel in the gold trade). Those 469 pud of Uralian and Altaian gold (the produce of the year 1837) are worth, in Prussian silver money, 7,211,000 dollars, or about £1,031,650 sterling, which produce is only an eighth less than that of Minas Geraes in Brazil, in the richest years of the flourishing period from 1752 to 1761; one-third, however, less than the produce of New Grenada, Chili, and Mexico, shortly before the breaking out of the revolution in Spanish America. If we consider the enormous extent of the Siberian continent, and recollect the rapid increase of gold from the Ural in the years 1822, 1823, and 1824, it will appear extremely probable that the reflux from east to west (from Asia to Europe) has by no means reached its maximum. The produce of eastern Siberia will, perhaps, increase more rapidly than that of the washing of the Ural, where the richest beds were first (and in the beginning, unfortunately, only superficially) worked. In the hydrostatic separation on the washing floors, a considerable quantity of precious metals, which cling to grains of oxide of iron and other light substances, is undoubtedly lost. This is

not the place to enquire whether the ingenious and plausible method suggested by Colonel Anassaw, intendent at Slatoust, of amalgamation with iron and the application of sulphur to the substance thus produced, would be successfully applicable on a large scale. When we consider the size of the masses to be smelted, the difficulty of transporting a sand so poor in gold, as well as the quantity of fuel required, the continued and well-directed experiments hitherto made would seem to have determined its impracticability.

The notions we have obtained, during the last fifteen years, concerning the present productiveness of Northern Asia in gold, lead us almost involuntarily back to the Issedones, Arimaspi, and the gold-guarding griffins, for whom Aristeus of Proconnesus, and, two centuries later, Herodotus, have obtained so lasting a reputation. I had the pleasure of visiting, in the southern Ural, the spot where, a few inches under the turf, masses of brilliant gold, weighing 13, 16, and even 24 Prussian pounds, were discovered. Still larger masses may have lain like pebbles, unobserved, on the surface of the ground. No wonder, therefore, if, even in remote antiquity, this gold was collected by hunting and pastoral tribes; that the fame of such riches should resound to a distance, even to the Grecian colonies on the Euxine—colonies which, at a very early period, had established intercourse with north-eastern Asia, beyond the Caspian Sea. Neither the trading Greeks nor the Scythians came themselves as far as the Issedones; they had intercourse only with the Argippeï. Niebuhr, in his enquiries concerning the Scythians and Getæ (enquiries by no means confirmed by what we have since learned concerning the diversities of race and structure of language among the northern tribes), places the Issedones and Arimaspi to the northward of Orenburg, that is, in the region so rich in gold, now become familiar to us, on the eastern declivity of the Ural. This opinion is supported in the valuable work of the privy counsellor Eichwald, recently published, *On the Ancient Geography of the Caspian Sea*.—Heeren and Völchen, on the other hand, place this gold country of Herodotus in the Altai, and I admit that the local circumstances appear rather to justify the interpretation. Herodotus describes a trading route, along which, by means of the Issedones and Scythians, the gold of the northern Altai, or at least the fame of it, could reach the Hellespont. In order to penetrate as far as the Argippeï, who are represented as bald-headed, with flat noses and large jaw bones, the Scythians and the Greeks of the Euxine colonies were compelled to

employ seven interpreters of seven different languages.* Since the discovery of such rich beds of gold sand in the mountain chain which the Altai sends out to the northward, in the parallel of Tonsk, the position of the Arimaspi in a region far to the eastward of the Ural, certainly gains in probability. The fable of the gold-guarding griffins of Herodotus, according to the surmise of a learned and intelligent traveller, Adolph Herman, is connected with the fossil remains of antediluvian *Pachydermæ*, so frequently met with in Siberia, which the imagination of the native tribes has transformed into the claws and head of a gigantic bird. "Were we," concludes Mr. Erman, "disposed to find in this arctic saga the prototype of the Grecian one of the griffins, it is strictly true that the northern searchers for ore draw the gold from under the griffins; for gold under beds of earth and peat, filled with these bones, is now, as formerly, one of the commonest phenomena." However attractive this explanation, the circumstance of the fabulous beings (the griffins) being mentioned in the poems of Hesiod is somewhat opposed to it, as is also the fact of their decorating the gates of Persepolis as lion eagles, or Sphinges.

I have already noticed the fact that in the Ural enormous masses of gold are found a few inches below the turf; running water, or other trifling causes, may have so far laid them bare that they touched the very surface of the earth. The discovery of beds of sand containing gold beyond the Obi in Northern Asia, the increase in amount of one year's produce of the Altaian or Kusnezksch wash gold to the weight of 130 pud, is an event in the history of the gold trade; an event the more remarkable inasmuch as it belongs to that part of Asia more immediately subject to Europe, and the entire produce will consequently be thrown into the European gold market. However ancient may be the mining in solid ore in Siberia, under the indefinite denomination of "*Tschudischer Tchürfe*," still the considerable masses of wrought gold found in the graves on first taking possession of that country, may be more readily accounted for by an early discovery of gold pebbles in diluvial soil near the surface of the earth. Müller, the excellent historian of Siberia, relates that a remarkable depreciation in the value of gold in Krasnojarsk took place on the first discovery of the treasures contained in the graves (Karganui).

The interior of Asia, between the mountain ranges of the Himalaya and the Volcanic Celestial mountain, forms, like China, one great

* Herodotus, iv., 24.

political and commercial community. However little we may know of those regions since the brilliant periods of the Mongol dynasty, at the close of the thirteenth century (from the travels of Marco Polo), still much information has recently been obtained (in the south through India, in the north through Siberia) by Europeans concerning the gold-sand beds of that extensive tract. The journals of Calcutta inform us that the rivers in the whole of western Thibet contain gold, which the natives obtain by amalgamation.

The old Indian mythologists make the ruler of the north (Kuvera) the god of riches also; and it is remarkable enough that the residence of this deity (Alakâ) must be sought for, not on the Himaylaya itself, but on the Kailâsa, beyond the Himaylaya, in Thibet. Still further to the north-west, beyond the mountain chain of the Kunlan, which separates the districts of Ladak and Khotan, Heeren places, and, I think, with much probability, the great golden sand deserts, visited by the Indians bordering on Kaschmir; and containing "ants less than dogs, but larger than foxes." It is on the western declivity of Bolor that the most recent and intelligent explorer of this terra incognita (Alexander Burnes) has described the gold sand-beds of Durwaz and the upper course of the Oxus.

Almost at the same moment in which the Ural opened its golden treasures, and began to replace what the diminished produce of Brazil was no longer in a condition to supply, strata containing gold were discovered in the southern part of the Alleghany, in Virginia, North and South Carolina, Georgia, Tennessee and Alabama. The most flourishing period of these American gold washings was from 1830 to 1835.

It is true that, in the last eight years, they have not produced more than $4\frac{1}{2}$ millions of dollars; the appearance, however, of gold so near to the coasts of the Atlantic is, in a geological point of view, deserving of more attention than has been given to it in Europe. It is a circumstance possessing great historical interest also, since the quantity of gold found by the first Spanish conquistadores, among the natives of Florida, need no longer be considered as the result of ancient intercourse with Mexico or Hayti. Jacob, in his oft-cited work, was only enabled to estimate the produce of the North American gold washing at 130,000 dollars; but in a few years subsequently it rose to 800,000, and even a million. In the county Cavarra (North Carolina) was discovered a golden pebble weighing 28lbs. English, and near it several from 4 to 10lbs. Since my return from Siberia I have incessantly, but almost fruitlessly, attempt-

ed to procure more precise information concerning the progress of the gold washing in the southern states; and it is only quite recently that (owing to the kindness of the present bank director, Mr. Albert Gallatin, one of the most intelligent men of the present day) my wishes have been gratified. I here insert some extracts from the letter of this distinguished traveller. "The productiveness of the gold mines of the Ural, and perhaps of the entire of Northern Asia, must certainly have drawn your attention to our gold washing and mining in the southern States. I hope shortly, by the assistance of Professor Patterson (who is at the same time director of the mint), and Professor Renwick, of New York, both distinguished mineralogists, to be in a condition to answer your geological questions. I send you, from official documents, a special report of what has been coined at the mint, from our inland gold, since 1824."

ANNUAL DELIVERY OF GOLD AT THE MINT FROM THE MINES
OF THE UNITED STATES.

Year	Virginia.	North Carolina.	South Carolina.	Georgia.	Tennes- see.	Alabama.	Total.
	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.	Dollars.
1824	—	5,000	—	—	—	—	5,000
1825	—	17,000	—	—	—	—	17,000
1826	—	20,000	—	—	—	—	20,000
1827	—	21,000	—	—	—	—	21,000
1828	—	46,000	—	—	—	—	46,000
1829	2,500	184,000	8,500	—	—	—	140,000
1830	24,000	204,000	26,000	212,000	—	—	466,000
1831	26,000	294,000	22,000	176,000	1,000	—	520,000
1832	34,000	458,000	45,000	140,000	1,000	—	698,000
1833	104,000	475,000	66,000	216,000	7,000	—	868,000
1834	62,000	880,000	88,000	418,000	3,000	—	868,000
1835	60,000	268,000	42,400	319,000	0,100	12,200	698,000
1836	62,000	148,000	55,200	201,400	0,300	—	467,000
	374,000	2,465,000	298,100	1,680,800	12,400	12,200	4,844,500

The profit, and with it the taste for mining speculations, have rapidly declined since 1835. In a country in which uniform prosperity is accompanied by unfettered intercourse, channels for the more profitable employment of capital will necessarily present themselves; in the history of the bullion trade, however, the masses obtained from the bowels of the earth and brought into circulation, as well as their ebb and flow in different directions, offer greater interest than the temporary profit afforded by the working of the mines.

The flow of the precious metals from Asia and America to our

smaller continent, and from it partially back again to the parent source, follows, like fluids, the laws of equilibrium. The rich, but almost unexplored, regions of central Asia and Africa, form smaller insulated basins, possessing slight intercourse with the coasts, and, consequently, with general commerce. Under the influence of western civilization, however, from Nertschinsk, the Altai, and Ural, and beyond the Atlantic from the Missouri, there exists a continual flow in the intercourse of the precious metals; the exchangeable value of which, whether we consider the metals in relation to each other, or as the standard of the price of wares, is by no means entirely or principally determined by the increase or diminution in metallic production. This exchangeable value (I here repeat it) is affected in an equal degree by the complicated arrangements and fluctuating relations of modern society; by an increasing and decreasing population, and its progress in civilization; by the demand (regulated by the population) for an increased circulating capital; by the frequently recurring necessity of remittances of bullion, as well as their destination; by the unequal wear and tear of the two precious metals; by the amount of paper money, as part of the circulating medium; all acting upon the existing metallic medium of exchange. A rise in the relative value of gold as compared with that of silver, may as easily occur during a general increase in production, as a temporary depression of the barometer, and an increased elevation of temperature, with a strong north-east wind. In the meteorological changes of the atmosphere, as well as in the general exchange of the precious metals, many disturbing causes are contemporaneously at work. The effect of each individual cause, in raising or depressing prices, is determinable; not, however (in the infinite number of accumulating disturbances), the amount of partial compensations, the nature and amount of the aggregate influence.

Any increase in the production which our imagination could call into existence, would appear infinitely trifling compared with the accumulation of thousands of years now in circulation, were we to consider these existing in coin or wrought up for useful purposes. Every increase, however inconsiderable, certainly produces its effects in the long run; but as an accumulating population, with increased acquirements, has occasion for a greater circulating capital, so, notwithstanding the influx, by too frequent repartition, a sensible deficiency may be brought about. Before the important discoveries on the eastern side of the Ural, which began to produce their effects in the years 1823 and 1824 only, the exchangeable value of silver, as

compared with gold, in the important market of Hamburg, was, taking the average of the years 1818 to 1822, as 1 : $\frac{1}{7}\frac{1}{2}$; while, subsequently it fell, on the average of the five years from 1830 to 1835, to 1 : $\frac{1}{7}\frac{1}{2}$ only. In the same interval, in order to restore the metallic currency in England, as I have already stated, 1,294,000 marks were brought into circulation. What share, therefore, has the diminished exportation of precious metals from the New World, had upon this alteration in the exchangeable value? It is scarcely necessary to take into calculation the Brazilian gold washing, since its annual supply, during that period, scarcely amounted to 1700 marks.

Now if we assume that, in the twelve years immediately subsequent to the revolution, the production of Spanish America had sunk to below one-third of what it had been during its last flourishing period (1800—1806), still the twelve years diminution only amounts to 83,200 kils. Now the Ural, in the years 1823 to 1827, has already furnished compensation to the amount of 19,300 kils; so that the diminution in the quantity of gold received in Europe only amounts, for the whole of these twelve years, to 286,000 marks. I have purposely selected an example presenting tolerably exact numerical elements. The result is, a decrease in the importation of gold, amounting to between one-fourth and one-fifth of the quantity coined, during the twelve years, by the London mint. If, therefore, we consider the exchangeable value of the precious metals, freed from the inconsiderable local casualties—the value of gold bars at Hamburg, namely—we shall be unable to discover, between 1816 and 1837, either the influence of the Asiatic mines, or the diminished production of Spanish America.

The maximum which the exchangeable value of gold attained in 1827, has been maintained, with trifling variations, till 1832; at which period a gradual, but regularly progressing, depreciation is observable. The Russian gold, from the Ural and Siberia, has partially contributed to this result. We must not, however, forget that the entire produce of Russia, whatever importance we may attach to it in other respects, in the years 1823 to 1837, only amounts to about 302,000 marks—one-nineteenth less than the diminished production of Spanish America, in the years 1816—1829. And even at the present moment, the renewed working of the gold mines in the free states of South America, has not been so general as that of silver. Besides, the North American states, scarcely recovered from their financial difficulties, have occasion for considera-

ble remittances of bullion from Europe. This causes a drain to the westward, which, together with the other continually acting causes, may have brought about the effects which we are disposed to attribute to the increased produce of Asia alone. The principal ground, however, of the inconsiderable influence produced by the contributions from the Ural and Northern Asia lies, as I have already remarked, in the relative insignificance of the influx, compared with the quantity of precious metals already existing. The exports to Asia, which, in another place and at different periods, I have had occasion to examine, are decidedly on the decline. In the year 1831 Jacob still estimated the annual loss in balance of trade by the Cape of Good Hope at £2,000,000 sterling. As far as I can recollect, this was also the opinion of that great statesman, Huskisson, so prematurely taken from us. Notwithstanding the general use of coffee, tea, sugar, and cocoa—articles unknown in the fifteenth century—the trade in spices is still a considerable article in the passive commercial balance of Europe. In the states of the German Union, the consumption of spices, according to the most recent official enquiries, has increased, during the years 1834, 1835, and 1836, from

2,426,000
2,582,000
To 2,876,000 Prussian dollars.

In France, the consumption in the same years was only

5,476,000
3,982,000
4,856,000 francs.

In the whole of Europe, however, with a population of at least 228 millions, it is probably not less than fourteen to sixteen millions of dollars, two-thirds of which consist of vanilla, nutmegs, pepper, and cinnamon. When we reflect how considerable must be the amount of the value of spices in the present consumption of Europe, compared with what it was at the conclusion of the fifteenth century, though constituting the most important part of the then existing commerce, we shall discover another remarkable example of the potency of the metals, when exercising their concentrated force on a narrow space (at that time, the shores of the Mediterranean and western Europe). The trade in spices accidentally caused the discovery of the new continent; it led the Portuguese round the southern extremities of Africa to India, as it had the Greeks

and Romans to Taprobane. At the time when Christopher Columbus sought to "reach the east through the west," Paul Toscanelli, of Florence, writes to him, as early as the 24th of June, 1474, "I am rejoiced to hear that you are approaching the accomplishment of your great and laudable desire, to reach, by a nearer route, *there*, where spices grow, 'onde naccen las especerias.' " With what complaints do the writings of the Italians abound, what imprecations are heaped upon the Portuguese, because they had penetrated by sea to India, and threatened to annihilate the spice trade of the Venetian, Pisan, and Genoese merchants! Cardinal Bembo calls it a "*malum inopinatum*," and seeks for philosophical grounds of consolation. Petrus Martyr d'Anghiera writes to his learned friend, Pomponius Latus, "*Portugalenses trans æquinoctium aliamque arcton, aromatum commercia prosequuntur, Alexandrinos ac Damascenos mercatores ad medullas extenuant.*" The opinion propagated by the Genoese, that the new route by the Cape of Good Hope would soon be relinquished, because the spices suffered from the sea air in the long transit, found but little credence; and the long calumniated Amerigo Vespucci (only three years after Gama), with his usual acuteness, detected the right point of view here also. He observes, in a newly-discovered letter, written to Lorenzo Pietro de Medici, 4th June, 1501, from the Cape de Verde islands, on meeting the remains of Cabral's fleet, on its return to the Tagus, "You will soon hear great news from Portugal. The king has now a rich and most important commerce in his hands (*grandissimo traffico e gran ricchezza*). May Heaven lend its blessing thereto [Vespucci was at that time in the Portuguese pay]! Now will the spices go from Portugal to Alexandria and Italy, instead of (as hitherto) from Alexandria to Portugal. Such is the way of the world (*Così va el mundo*)!"*

Berlin, June, 1838.

* A pud is equal to thirty-six pounds weight. The kilogramme is about two and a quarter pounds weight. The mark of silver is two pounds two shillings sterling; the mark of gold, eight ounces. The piastre is four shillings and fourpence sterling.

A PAPER ON JUDICIARY STATISTICS.

By WILLIAM WILLS, Esq.*

WE must renounce some of the surest conclusions of the understanding, supported by the judgment of the most enlightened philosophers of every age and country, before we can entertain a doubt that there exists a permanent order in moral *events*, and that moral *causes* operate with an uniformity equal to the stability of physical laws. It must be admitted that there is *apparently* more of uncertainty and confusion in moral than in material phenomena; but this is a circumstance sufficiently accounted for when we consider the latency and subtlety of mental operations.

Since human nature is essentially the same in every latitude and under every variety of social condition, the slightest reflection would lead us to conclude that moral facts are subject to the operation of the law of *great numbers*, which prevails with respect to facts of all other kinds within the sphere of our observation, however intractable they may, on a superficial view, appear to be. Nothing, for instance, to all appearance, is so purely indiscriminate and exempt from any definite rule, as the occurrence of death; yet, when the subject is closely surveyed, we find that what we should otherwise be disposed to call the chance of death is governed by a law as certain and immutable as that which brings a missile to the surface of the earth. If we take a given number of lives of the same age, a geometric curve may be drawn, which shall represent the course of death amongst those lives, and the times of their gradual and total extinction. Equally precise results have been developed by the application of this law to the shifting and evanescent fluctuations of the atmosphere and the tides, and even to the subtle influences of temperature.

Analogy, the safest foundation of philosophical conjecture, naturally conducts us to the conclusion that *moral* events dependent upon the passions, the knowledge, and the will of man, are all subjected to the dominion of the same general rule. Angeville, in his *Essai sur la Statistique de la Population Française*, says, "It would seem as if the free will of man existed only in theory, and as if every society contained within its bosom germs of evil which must

* Read at a meeting of the Birmingham Literary and Philosophical Society, on the 1st of July, 1839.

infallibly develop themselves." "The harvest of the fruits of the earth," declares this writer, "is more subject to variations than the harvest of crime." In the present state of statistical knowledge it may not always be practicable to reduce moral facts to numerical rule; but nevertheless we may obtain important approximate data and verifications. It was justly observed by Hartley that "this mode of considering the subject, whenever the case admits of it, is much more precise and satisfactory; just as the judgment made of the degree of heat by the thermometer differs from that made by the hand."

It is my design in this paper to endeavour to exemplify this train of thought, in its application to some questions of Judiciary Statistics, a title which, though somewhat novel, is a more specific and appropriate designation than any other which I could have borrowed from common use; and I shall also submit some inferences and deductions which have presented themselves upon the perusal of some late parliamentary returns connected with this subject. I am aware that the accuracy of some of our official tables has been questioned; but the returns relative to criminal justice, so far as they extend (for they are still incomplete), are founded upon accurate data not liable to the same objections.

The facts which form the basis of this paper are exhibited in three tables, which I will shortly explain.

TABLE A.

Years.	Committd.	Convicted.	Acquitted, &c.	Executed.	Ratio of Convictions to Acquittals.
1820	13710	9318	4392	107	.6722
1821	13115	8788	4327	114	.6701
1822	12241	8209	4032	97	.6706
1823	12263	8204	4059	54	.6690
1824	13698	9425	4273	49	.6887
1825	14437	9964	4473	50	.6901
1826	16164	11107	5057	57	.6933
1827	17924	12567	5351	73	.7010
1828	16564	11723	4841	58	.7007
1829	18675	13261	5414	74	.7100
1830	18107	12805	5302	46	.7071
1831	19647	13830	5817	52	.7039
1832	20829	14947	5882	54	.7123
1833	20072	14446	5626	33	.7197
1834	22451	16995	6156	34	.6996
1835	20731	14729	6002	34	.7104
1836	20984	14771	6213	17	.6910
1837	23612	17080	6522	17	.7234
1838	23094	16785	6309	6	.7722

The Table A, compiled from various parliamentary documents, exhibits for every year from 1820 to 1838 inclusively, the total number (1) of commitments for trial for crime in England and Wales; (2) of convictions; (3) of acquittals, including bills ignored and prosecutions abandoned; (4) of executions; and (5) the ratio of convictions to acquittals. The official returns do not distinguish the bills ignored from the prosecutions not followed up; so that it is only to be collected in general that the cases in which bills are not found, or are not prosecuted, vary from one-half to two-thirds of the aggregate number included under the head of acquittals. It is to be hoped that an omission so material will hereafter be supplied.

The Tables B and C contain the same particular results, taken from the *Comptes genereaux de l'Administration de la Justice Criminelle*, recently published by the French government.

TABLE B.

Years.	Number of Persons Tried.	Convicted.	Ratio of convictions to number of trials.
1825	6652	4037	.6068
1826	6988	4348	.6222
1827	6929	4236	.6113
1828	7396	4551	.6153
1829	7373	4475	.6069
1830	6962	4130	.5932
	42,300	25,777	.6094

TABLE C.

1831	7606	4098	.5388
1832	7555	4448	.5877
1822	6964	4105	.5895

It appears that the number of persons tried in France before the superior courts, during the six years from 1825 to 1830, amounted to 42,300, and the total number of convictions to 25,777; the mean ratio of the latter to the former is, therefore, .6094; and the probability that the unknown ratio for any other year does not differ from the average of .6094, is .0067, or $\frac{67}{10000}$.

It must be borne in mind that the number of persons tried in France and England, as shewn in these tables, affords no criterion for judging of the relative amount of crime in the two countries, since the correctional tribunals in France possess jurisdiction over

offences of a much graver character than are cognisable out of the courts of Assize and Sessions in this country, and are competent to inflict a sentence of imprisonment even to the extent of five years.

The government of Belgium, about the same time as that of France published a similar *Compte general de l'Administration de la Justice Criminelle* in that kingdom, where trial by jury was established in 1831, and a majority of seven to five was prescribed as necessary to conviction. It is curious to remark that the relation of the number of convictions to the whole number of offenders, in the years 1832, 1833, and 1834, was $\frac{1}{100}$, $\frac{6}{100}$, and $\frac{61}{100}$, the mean value of which $\frac{6}{100}$ differs rather less than a one-hundredth part from that deduced from the French tables.

1. The French and Belgic tables show, that though in different countries the ratio may vary, yet in ordinary circumstances, and when no external influences affect the equilibrium, there is in the same country, in a given number of trials, a nearly constant ratio of convictions to acquittals; and this result of the application of the law of great numbers forms an important element in the application of the theory of probabilities to the determinations of legal tribunals.

2. The same tables present some striking illustrations of the effect of legislation upon the relative numbers of convictions and acquittals. The great diminution of offenders in France in 1833 is unquestionably owing to an alteration in the law, by which many offences were withdrawn from the cognisance of the courts of assize, and placed under the jurisdiction of the correctional tribunals. In the years 1831, 1832, and 1833, the ratios of convictions to acquittals were severally as the numbers .5388, .5887, .5895; and the mean of the years 1832 and 1833 exceeds that of 1831 by .0503, or about one-twentieth: a difference too large to be accounted for, unless some organic change had taken place in the constitution of the tribunals, or some legislative alterations or ameliorations had disposed them to convict upon a slighter degree of evidence. Now we can trace in the most satisfactory manner the influence of causes of both these kinds, and in a way which excludes the supposition of mere coincidence.

From the year 1825, with which the French tables commence, to 1830, inclusive, the law of France required for conviction a majority of at least seven to five, and also the concurrence of a majority of the judges when the verdict was supported only by that minimum majority. In 1831 the interference of the judges was abolished, and a majority of eight to four at least was required. Now it will

be seen that after the enactment of this law the ratio of convictions to acquittals dropped from .6094 to .5388, a difference of .0706. In 1832 the law, while it continued the same as to the required majority, provided that, in case of conviction, the jury should determine upon certain circumstances of extenuation, the effect of which, if found affirmatively, is a considerable diminution in the quantum of punishment which the law otherwise inflicts. During the years 1832 and 1833 the ratio of convictions to acquittals increased somewhat more than .05 : in other words, not more than 40 or 41 were acquitted, instead of 46 to 100 persons accused.* It is also most remarkable that during the six years to which the table extends, the number of cases in which the intervention of the judges was rendered necessary, from the verdicts being found by the minimum majority, was 1911—that is, in the proportion of .0711 to the numbers tried, differing only by a very small quantity from the fraction .0706, expressive of the difference of ratio in the number of convictions by the respective majorities of seven to five, and eight to four, before the introduction of the question of extenuating circumstances.†

Many other satisfactory illustrations might be adduced of the connection of the law of great numbers with moral facts ; but our limits render it necessary that I proceed to the application of the foregoing remarks to the statistics of our own country, as exhibited in Table A.

3. It will be observed that during the whole period from 1820 to 1838, there has been a regular increase in the number of commitments for trial—that there has also been a progressive and prodigious diminution of capital punishments, the series converging almost to zero—and that the ratio of convictions to acquittals in the same period has regularly increased, almost without retrogression, from rather less than 67 to 100 in 1820, to 72 to 100 in 1837, and to about 77 to 100 in 1838, being a difference of ten per cent. between the first and last of those years, and exceeding by about sixteen per cent. the ratio of convictions in France and Belgium.

It must be admitted that, in *appearance* at least, *some* of these results are anomalies ; but, in all probability, they are so in appear-

* The law of September, 1835, has introduced voting of the jury by ballot, and reduced the majority to seven voices in twelve. The results of this change I have not at present the means of stating.

† See *Recherches sur la Probabilité des Jugemens en matière criminelle et en matière civil.* Par S. D. Poisson.

ance only. It is unquestionable that *all* the elements of judgment are not before us ; but, even in the present state of statistical knowledge, we are in a condition to enter upon the solution of this interesting problem, and may be able to show, with great moral assurance, that the apparent inconsistencies are explicable in accordance with the doctrine which I have advanced.

For the purpose of narrowing the question, it is necessary to give due weight to some preliminary considerations auxiliary to my main argument.

First, The increase in the number of offenders committed for trial must be taken relatively to the increase of population, which, during the nineteen years comprised in the table, has been about thirty per cent., and also in connection with the improved state of the police in many large towns, the facilities afforded to prosecutions by the establishment of local courts, and the amendments in the law of criminal procedure [7th of Geo. IV, c. 64], by which numerous chances of escape from trifling and absurd technicalities have been abolished.

Secondly, If the unanimity which the law theoretically requires in the jury were real, it is perfectly certain that, upon every sound principle of judgment, the relation of convictions, instead of being greater, ought to be much less than in France and Belgium ; from which it may probably be fairly concluded that verdicts are more frequently those of the majority, the minority surrendering their own judgments to that of their co-jurors, a conclusion which would account for a higher ratio of conviction in England than in either of those countries.

Still, however, after making all due allowance for these subtractive abatements, there is a residual quantity to be accounted for ; and the question returns, though somewhat modified, can these apparent anomalies be accounted for ? and in what manner ? To these questions it may be confidently answered, that the action of public opinion upon the executive and the tribunals in the first instance, and ultimately upon the legislature, fully accounts for the supposed discrepancies.

The course of legislation in this country, in regard to crime—a topic on which I can but glance on this occasion—is without and parallel. Our code (if code it might be called) consisted of a chaotic mass of statutes, without any principle of order or connection, inflicting the punishment of death upon nearly two hundred different actions, most dissimilar in moral character and tendency. Dr. Johnson thus sums up the process of legislative procedure :—" It

has always been the practice, when any particular species of robbery becomes prevalent and common, to endeavour its suppression by capital denunciations. Thus one generation of malefactors is commonly cut off, and their successors are frightened into new expedients; the art of thievery is augmented with greater variety of fraud, and subtilised to higher degrees of dexterity, and more occult methods of conveyance. The law then renews the pursuit in the heat of anger, and overtakes the offender again with death. By this practice capital inflictions are multiplied, and crimes very different in their degrees of enormity are equally subjected to the severest punishment that man has the power of inflicting upon man.* The conduct of our legislators in this respect may remind us of the learned physician in *Gil Blas*, who believed that the efficacy of a prescription must increase with the quantity of the dose. Nor were these inhuman enactments a dead letter. When Mirabeau was in England, he asked a friend, with whom he was dining, if it were true that twenty young men had been executed that morning at Newgate. Upon being told that there was no reason to doubt it, he exclaimed, "The English are the most merciless people I ever heard or read of." Within a few years, eight men were executed together, in the neighbourhood of this town, for offences unattended with bloodshed or violence.

Sir William Blackstone declares that "so dreadful a list, instead of diminishing, increases the number of offenders. The injured," says he, "through compassion, will often forbear to prosecute; juries, through compassion, will sometimes forget their oaths, and either acquit the guilty or mitigate the nature of the offence." From a number of cases before me I select two, as strikingly illustrative of the natural disinclination of juries to execute laws unreasonably severe. A woman was tried in 1807 for stealing a bank note of the value of ten pounds, and the fact was proved; and yet the jury, with the approbation of the judge, returned a verdict guilty of stealing to the amount of less than forty shillings. In the sessions papers of 1808 is recorded the case of an apprentice to a lapidary, tried before Mr. Justice Lawrence, for stealing two bills of exchange, value ten pounds each, and eight bank notes, value ten pounds each; and though the facts were clearly proved the jury found him guilty of stealing to the value of thirty-nine shillings. Before various parliamentary committees it has been proved, in the

* *Rambler*, No. 114.

most satisfactory manner, that the unjust severity of the laws totally defeated their purpose and rendered them inoperative.

The effect of a mitigation of the excessive rigour of the law has been, to remove the scruples of prosecutors, witnesses, and jurors. The late Recorder of London, before a committee of the House of Commons, stated that one cause of the increase of crime was the repeal of the capital punishment from the privately stealing from the person; "that offence," adds he, "has increased beyond conception." Lord Eldon, in a debate on the 2nd of April, 1813, whether stealing to the amount of five shillings privately from a shop should be punishable by death, declared his conviction that "the house never gave its concurrence to a more mischievous bill than that which altered the law as to the crime of privately stealing from the person, as may be seen in the increase of that crime since the period of the passing of the act repealing the capital part of the punishment." While I would employ the strongest language in reprehension of the inhuman tendency and object of this testimony, I may admit its accuracy, and avail myself of it for a different and legitimate purpose. The necessary inference from it is, that capital punishment prevented prosecution, but assuredly not that the crime itself had increased: that compassion led to connivance and compromise of crime. The execution of Fauntleroy, whose punishment would have been in accordance with public sympathy if he had been treated as a swindler, excited general commiseration, and accelerated the abolition of capital punishment for the offence of forgery.

A brief retrospect of the history of criminal legislation in this country within the last thirty years, will equally lead to the conclusion that prosecutions have been encouraged in numberless instances where the parties would otherwise have declined to assist in taking away human life.

The darkness in which the barbarous legislation of former times originated, for a long period interrupted only by fitful and intermittent meteors, was at length exposed to a more steady light. A succession of illustrious men successfully evoked the dormant spirit of humanity; and the influence of their exertions was manifested in a more lenient administration of the laws. But it was inconsistent with the growing intelligence of the times that the life of man, and the execution or suspension of the laws, should depend upon the tempers and opinions—often various and contradictory, if not sometimes capricious—of the individuals appointed to administer them.

Public opinion, under the able leadership of Sir Samuel Romilly, was first practically brought to operate upon the legislature in 1808, when the repeal was procured of the act of parliament which made privately stealing from the person a capital offence [48th Geo. III, c. 129]; but it was not until after many unsuccessful struggles that in the year 1820 [1st Geo. IV, c. 117], the consent of the legislature could be obtained to repeal the laws which made the offences of privately stealing in a shop goods of the value of five shillings, or in a dwelling house, or on board a vessel in a navigable river, of the value of forty shillings, punishable with death [1st Geo. IV, c. 115, 116]. Several other capital felonies were also repealed at the same time; and a stop was put to the creation of new capital felonies. The number of executions continued progressively to decrease; and experience proved alike the safety and the efficacy of the change. Still however, innovation proceeded so slowly that even in 1827, when the criminal laws were consolidated and amended, the only alteration made as to capital felonies was to raise the sum which constituted larceny in a dwelling house capital from forty shillings to five pounds. In 1832 capital punishment was abolished in regard to the stealing of horses, cattle, and sheep; larceny, to the amount of five pounds in a dwelling house; coining and forgery, except of wills, and powers of attorney to transfer stock: in 1833, for house-breaking; in 1834 for returning from transportation; and in 1835 for sacrilege, and letter stealing by the servants of the post office. It is the glory of the present reign that by one of its first legislative acts, nearly all the numerous remaining capital felonies were swept away, leaving only about twelve offences, some of them of very unfrequent occurrence, now punishable with the extreme penalty of death.

It is a fitting sequel to this brief historical outline to add that experience, so far as its results have been ascertained, has verified the anticipations of the enlightened men who so long asserted—against the sneers of the sticklers of those days for the wisdom of our ancestors—that the severities of penal justice are most effective for their proper end, when moderated by the temperaments of equity and humanity. In fine, the late parliamentary returns, including those which have been just published, (which latter are framed with a particularity and minuteness, hitherto unknown in this country), establish the gratifying facts, that the increase of crime which has of late years taken place, is chiefly in larceny and other offences of inferior enormity—that in the more atrocious offences there has been a considerable decrease—that the increase of crime in general has

been materially checked, and that even in the application of the substituted secondary punishments, it has seldom been necessary to inflict the full maximum amount of penalty. To complete this survey, it is only necessary to add, that the ratio of offenders to population is not greater in England than in the neighbouring kingdom of France.

I think I have satisfactorily made good, by proof, my several points—that the fluctuations in the relative number of convictions and acquittals are explicable by the peculiarities of our institutions and practice, and by the fusion of old opinions and laws into forms more accordant with justice and social sympathy—that, when all circumstances and qualifications are taken into account, the apparent increase of crime exhibits no anomaly to our national disparagement—and that experience has amply confirmed the wisdom and propriety of the great changes which public opinion has forced upon the legislative adoption in regard to criminal jurisprudence.

Would that, in other respects, the documents referred to afforded equal reason for gratulation! But, alas! a threatening cloud obscures this part of the prospect. The parliamentary returns of 1838 exhibit the melancholy fact that of the 23,094 persons who, during that year, became inmates of our prisons, 7943 could neither read nor write at all, and 12,834 more could do so but imperfectly—in other words, not at all for any useful and important end. Equally lamentable and striking are the educational results deduced from the French tables. But the momentous importance of the subject demands more than an incidental and summary notice, such as our present limits allow; and I hope for an opportunity of considering this matter more in detail at some future time. If we consider how much of what is called education, in our schools for the poorer classes, is of a merely sectarian character, and how little of it consists of sound instruction in the principles of duty, and in useful knowledge available for the great ends of life; if we reflect upon the extent of our national wealth created by mechanic skill and manufacturing industry; if, moreover, we contemplate the condition of countless thousands of our infant and juvenile population, summoned by the stern and dismal matin bell, not to the natural enjoyments of childhood and youth, but to congregate, uninstructed and unwarned, amidst the corrupting associations of the factory and the mill—made

“The senseless members of a vast machine,
Serving as doth a spindle or a wheel”—

may it not be reasonably asserted that much of the crime we so loudly, if I must not say so inconsistently deplore, is chargeable upon ourselves, as the consequence of public supineness and remissness ; Surely the philanthropist may adopt the language of one of our most amiable poets, as expressive of his own fervent aspiration :—

“Oh, banish far such wisdom as condemns
A native Briton to these inward chains,
Fixed in his soul so early and so deep,
Without his own consent, or knowledge fixed !”

WORDSWORTH.

OBSERVATIONS ON THE ORIGIN AND PROGRESS OF ENGLISH LIBERTY.*

WHILST the martial forces of the other European monarchs were composed chiefly of the retinue of the great vassals, who obeyed but reluctantly, and only for a few weeks in the year, the royal summons to array themselves for the field, the English soldiery were composed, for the greater part, of a multitude of those petty landholders who enlisted themselves for no certain time, and followed the royal banner even far beyond their native island, and who decided more than once the fate of battle against the more numerous and imposing French troops, whose ranks were filled with the flower of the military order, with knights of high rank, and all the “pomp and circumstance of war.”

The judicial authority remained, as we have seen, until a comparatively modern period, in the immediate possession of the crown. Even that part of judicial practice and systematic distribution of justice which had grown into custom in England, was not, as in other European countries, divided and located in the various counties, for the purpose of general convenience and despatch, but emanated at once from the royal camp, and extended itself thence over all the districts of the kingdom, and to every subject of the king. The supreme rights of the liege lord, which in other countries, and in latter times, formed simply a protection to some anti-

* Continued from page 24.

quoted privilege as regarded a certain portion of law concerning landed property and some public rights, constituted in England the one grand soul of the entire civil and penal codes, the remains of which, still lingering near their old quarters, may be distinctly traced in the terms and forms which are at present still used in the proceedings of judicature. Oppressive laws with regard to private forests and chase, the purveyance of all kinds of natural productions for the use of the royal camp, at a certain arbitrarily fixed low price—the exaction of services from even tradespeople, such as goldsmiths, painters, &c.—the wardship of individuals of minor age, which yielded considerable revenues—in fact, all the ancient and arbitrary power of the landholder, appear to have been concentrated in the crown, and the prerogative of the kings of England, even in modern times, were based and consolidated thereon. Thus secured in the double armour of absolute supremacy, the English monarchs, whether in the palace, in the camp, or in the midst of the people, revelled as they willed, perfectly at home, as if in the circle of their own retinue.

Bondage, which constituted the true spirit of the feudal system, as Froissart (lib. ii., c. 74) observes, prevailed in the fourteenth century, in England, on a more extensive scale than in any other part of Europe, with this difference, that in other countries the feudal scheme was divided, broken, and local, and partook of the variegated and changeable character of the different landholders, who exercised their rights according to their peculiar humour and disposition; while in England feudalism bore one unvaried impress of universal submission and obedience to the supreme liege lord of the realm. The kings of England, like those of France, considered themselves, and with some reason, the first and *only* lords of the kingdom—a circumstance which perhaps may explain the reluctance of the Scots to wed their young queen to Edward VI.; for doubtless they apprehended, and with justice, that their national right, customs, and liberty, would be absorbed by the limitless prerogative enjoyed by the crown of England, which even surpassed that of France, as testified by the conversation of Charles V. with the English ministers, as late as 1549.*

At a later period, when the judges and other functionaries were strenuously endeavouring, in other parts of Europe, to create a new species of power for royalty from the fragments of early customs based upon foreign rights, the kings of England, who, in times of

* Burnett, vol. ii., p. 132—133.

peace, scarcely ever met with any resistance from among their subjects, while they never scrupled in time of war to break through the weak fences of the yet weaker law, had, after the termination of the civil war of the houses of York and Lancaster, attained the very zenith of power. Henry VII. governed more absolutely and despotically than any of his predecessors, at least, of those who held the crown since the proclamation of Magna Charta. His successor, Henry VIII, revelled in the plenitude of absolute power, and exhibited to his subjects, in glaring characters, the will and ability to wield that power which his father merely amassed and centralized. When the Duke of Somerset was created protector, during the reign of Edward the VI., he was invested with an extensive and boundless power, which ran even in the teeth of the very law ; and yet, in the bill of accusation which was brought against him by his enemies (who, by the way, did not neglect the least circumstance which might be turned against him, or construed into an act of culpability), not a word did they say on the well-known fact of his arbitrary and despotic management of the public affairs, and which was in open violation of established law. This circumstance at once proves that the unbounded regal power conferred on the protector was in perfect harmony with the spirit of the age. The bloody actions of Queen Mary might, perhaps, be attributed to her fanatical notions of her peculiar religion ; but the self-willed and arbitrary despotism of her sister Elizabeth, which she maintained throughout her brilliant reign, without encountering the smallest opposition, can only be accounted for on the ground of the ancient custom, which the people universally respected, and which, while it gave to the royal will the most unrestrained and complete license, obtained from all ranks the most unqualified submission ; and thus it was clearly argued and demonstrated in the sitting of parliament in the year 1601.*

Thus it stood until the period of the Stuarts. Those princes, more lavish and thoughtless than the Tudors, and at the same time being more straightened as to the means of maintaining their enormous expenses, were obliged to have recourse to severe exactions ; and so heavily did they weigh upon the hitherto uncomplaining people, that the whole nation became at once exasperated, and a violent moral revulsion was the consequence. A new mode of thought now took possession of the nation ; and instead of devising means for the restraining and defining bounds to the royal power, serious thoughts were expressed of abolishing it altogether. All the

* Hume, chap. 44.

prerogatives which were connected with certain revenues were still considered as the private property of the kings, and, as such, they were at times purchased from them for a certain sum of money; just as the peasants used to purchase exemption from soccage-service from their lords. Thus a negotiation was already commenced, between James I. and the parliament, for the purchase of the regal privileges of *wardships* and *purveyance*, for an annual sum of £.200,000, which, however, could not be brought to a satisfactory conclusion. The continual want of money under which Charles II. laboured, reduced many of the difficulties of those bargains between the monarch and the people, who, in fact, were willing to pay any price to the crown for its promise not to offend the constitution. The only political principle of import which henceforth was adopted and resolved to be acted upon, was, to place the *law* above any power, the monarch not excepted; yet even this measure, although it certainly tended to annihilate arbitrary power, did nothing directly for the law itself—it merely rendered the prerogative of the crown more *supportable*, but not more beneficial.

Hallam, in mentioning the arguments which have been brought forward by some to prove that prerogatives were originally granted to the crown for the benefit of the nation, observes that he is at a loss to comprehend them. A royal prerogative implies, in its original and true sense, an advantage in favour of the crown in certain cases, when its interests clash with those of the nation. Such prerogatives were wrested from the vanquished nation, by the Norman conqueror, against its will and consent; and, however modified or regulated such prerogatives become by the hand of time, no one who is acquainted with the laws and proceedings prevalent in our courts (continues Hallam), will fail of being startled at the rigour and injustice of a number of those prerogatives which are still in practice.

The boasted utility of such prerogatives may be on a par with that said to be derived from certain taxes: it may be difficult, perhaps, to say which of the two is the most beneficial to the country. For our own parts, we venture to affirm, or rather to submit as an opinion, that prerogatives, like taxes, are of doubtful utility or benefit to a nation, and that the less a people are visited by these things the better. Nor can we feel justified in supposing that those prerogatives of which we have spoken were originally planned for the specific service or benefit of the nation. If plan there was in their formation or introduction among the English, it must have been the solitary one of the Norman conqueror—the giant offspring

of his anxiety to secure to himself, and make the most of, his conquest.

That the increase of the royal power in England has been instrumental in increasing and consolidating the social ties of the nation ; that the intervenient petty power of the middle classes of the landholders, which in other countries were looked upon as a bulwark between the throne and the people, but in England constituted merely another class of subjects, and has done its work also toward the perfection of the noble structure of English civilization and liberty ; that the severe and extensive feudal system, which compelled every individual throughout the whole population to perform military service according to his station in society, and thus preserved England from the dire calamity of *standing armies*, which existed to a fearful extent in the other parts of Europe ; that a combination of these principal circumstances have not contributed largely to the advancement of true liberty and national independence, who shall say ? Yet the effects of these happy circumstances will be looked upon, by the philosopher, as far outstripping the designs and plans of human speculation ; and he will be prone, and we think justly so, to ascribe them to the all-powerful and far-seeing wisdom of that Supreme Being who leads his sentient creatures on through an eternity of ever-changing circumstances, and among imperceptible labyrinths of causes and effects, immeasurably beyond the range of mortal intellect.

The same course of events which marks the movement of the development of the civil laws and the royal power, manifests itself not less clearly in the origin and consequences resulting from those principles which stand in immediate connexion with the political liberty of England, as well as in the history of the great charter, the supposed first guarantee of that liberty, and in the annals of parliament and its progressive power.

The charter of liberty which the barons extorted from King John in the year 1215, and distinguished by the appellation *great*, was by no means the first of its kind. Henry I. had already granted to the nation a similar charter, in order to render himself more popular, and counterbalance the just odium which he had incurred, by usurping the throne which was the undoubted right of his elder brother Robert. Stephen, who had also to defend himself against a more legitimate claim, renewed that charter, which was afterwards confirmed by Henry II. All these documents, however, were but as a dead letter in the eyes of the princes, who, if their interests did not lie that way, neither acted up to the conditions and

promises contained therein, nor did they believe themselves bound to do so. The *Magna Charta* shared, at first, the same fate; at which we need not be surprised, since it did not differ in substance from the former documents, which were constructed, like all legislative attempts of inexperienced people, merely to meet the direct and palpable wants of the moment, rather than enforce into practice the provisions of its various clauses. The *Magna Charta* neither abolished the old authorities and courts of justice, nor established new ones; it did not provide for a better distribution of the social power, nor did it alter any thing in the existing principle of public right; it only met—and as far only as fair words could do—certain abuses and acts of violence, which were too glaring and frequent upon the surface of society to remain unnoticed. Nor did Henry III. scruple, scarcely a year after the proclamation of the charter, to violate one of its most important provisions—namely, that no taxes were to be levied without the consent of parliament. The same Henry recommended, it is true, to the sheriffs, in 1222, the observance of the *Magna Charta*, but in the true spirit of the arbitrary quibbler: this recommendation went no further than to those who were to pay the new taxes which he had ordered to be levied. Lastly, it may be easily inferred, from the thirty solemn confirmations which the succeeding parliaments exacted from various monarchs at different times, how frail that liberty must have been which required such frequent props and repairs, and how dependent her very existence must have been on the arbitrary will of the crown.

Probably there is not a single petty province in Europe that was not once in possession of a *Magna Charta*; or when the princes, in times when the system of loans and paper money was not yet fully developed, did not scruple, when they stood in need of money, to sell liberty and its appendant privileges to the people, for ready cash, and ratify the bargain with as many solemn oaths and written documents as might be required of them. But the force and validity of these oaths and documents ceased with their cause, and were soon forgotten by the princes when they had obtained their object; and, indeed, if any of these *promissory notes* happened to share a better fate, and stand the test of time, the cause must be sought in any circumstances, rather than in the force of the provisions contained in the documents themselves.

That the English charter has been preserved inviolate through so many ages, while other similar European instruments have died away into oblivion, may, perhaps, be chiefly ascribed to the very ample and copious expositions of numerous cases and provisions of

which the others were deficient. In other countries of Europe, while the efforts of liberty were bald and partial, and poorly followed up, the English mind was incessantly yearning after the charter, so much so that scarcely a case of national grievance could occur, in real truth, which was not specifically provided for in that charter: and (although, as we have said before, the enforcement of its clauses were not vigorously carried out) yet the English charter lived along from century to century, frequently absent in practical political life, but never from the memory and imagination of the people.

The most essential political results were mainly effected by the simultaneous changes which took place in the composition and operation of parliament. These so-called parliaments, or *great councils* of the first Norman kings of England, were no more than great feudal courts, or courts of fees, customary also among the other European nations; and where the liege, together with his immediate liegemen the barons, held either court over accused individuals, or consultations on the more important affairs of the state. The right and power of these assemblies differed in each district, and depended on the extent of the power enjoyed, from ancient usage, by the lieges of the various circles, and which, in England, amounted to an absolute sovereignty. The king (the first liege lord) was in possession of unlimited authority. In the great council called together by Henry II. in the year 1164, against Thomas à Becket, there were not only English, but also Norman barons, and, what was still worse, even liegemen of those vassals. This proceeding, which in other countries was considered irregular and illegal, was so entirely in keeping with the usages of the country and the spirit of the age (at least in England), that the said Becket, who was notoriously neither a thoughtless nor yielding foe to the king, did not think even of throwing in objections on that score against the competency of his judges. The vestiges of that unlimited feudal authority of the crown over the vassals and subjects, may be still traced in the customary law, by which no title or possession of barony can enable a man to take his seat in the upper house, without being previously installed to that purpose by the crown.

In the year 1214, Langton, Archbishop of Canterbury, effected the association of the barons, the original cause of the Magna Charta. In the following year, this same association, with the forced consent of the king, elected twenty so-called keepers of public liberty, who again, in their turn, elected twelve delegates of the freeholders in every county, for the purpose of noting and reporting

on passing abuses. These facts prove, as Hume observes, that the House of Commons was not as yet fully established ; for, had that been the case, such proceedings would have been unnecessary.

After the lapse of forty-three years, a similar occurrence gave rise to a measure which, in appearance, resembled something like the parliamentary aspects of later times. On the 11th of June, 1258, Montford exacted from Henry III. a further concession, by which twenty-four barons were appointed for the better regulation of public affairs, by whom four delegates were appointed in every county, to report the necessary information on passing political circumstances—not, as in 1215, to the heads of government, and by correspondence from their respective residences, but in person to the sitting parliament in Westminster.

The same Montford, Earl of Leicester (son of the elder Montford who, at the head of a crusade against the Albigians, blighted the first buds of religious liberty in the south of France, and stifled the spirit of enquiry in the blood of hundreds of thousands of martyrs), became in 1265 the actual founder of the House of Commons, and (to a certain degree) also of the civil liberty of England ; for we find representatives were sent to parliament by his influence, not only from the various counties, but also from towns and cities, the inhabitants of which were considered, hitherto, as unworthy of such a distinction.

This simple view of the use of parliamentary power in England, carries with it clear and conclusive evidence that, whatever may have been the intentions of those who contributed, accidentally or otherwise, to the creation of the Commons' House of Parliament, it was no part of the plan or the intention of the kings and the lords to permit an encroachment on, or a division of, their power. The representatives of the counties and cities formed, in the original sense of their calling, nothing more than a mere simple *committee of grievances* ; and their true character was merely the medium of reporting of events and abuses to the higher powers, and their position was not *in*, but before parliament, there to await its decisions. The respective spheres of operations of the two houses are plainly exposed in the form of the writ of convocation of the members by the king. The lords were summoned, *de arduis negotiis regni tractaturi et consilium impenturi* (to treat and give their council on the important affairs of the state) ; while the commons were convoked *ad faciendum et consentiendum* (that is, to act up to and consent). The real influence of the latter did not, as De Lolme observes, go even so far as expressed in the royal convocation. In most of the

early parliamentary transactions, it appears, by the preface of Ruffhead's *Collections of Statutes*, that not a word is mentioned of them, and wherever a circumstance occurs in which the commons are mentioned, they invariably appear, not as legislators, but as *petitioners*; and frequently they suffered the fate usually attending that class, in the direct refusal of those things for which they prayed, by the authorities to whom their petitions were addressed.

This humble position of the commons was manifest in many respects during a period of more than three centuries, by the graceless treatment they experienced, on many occasions, from the lords and the crown. A regular and independent participation in state affairs was not at that time demanded by the commons, nor would it have been granted by the lords. The two Spencers (the favourites of King Edward II.) were judged and condemned by the House of Lords alone. During the minority of Richard II., when bitter disputes arose on the subject of the administration of the crown and the education of the young prince, the commons made no sign of an inclination to political independence, but contented themselves with merely recommending, in obsequious and modest terms, to the lords, the adjustment of the affair.

The commons remained in this humble condition until, and during, the reign of Elizabeth; in which reign it devolved on a *philosopher* (no less a personage than my Lord Bacon) to inform them that the queen *forbad them* to interfere in state affairs. This declaration referred even to the question of her marriage, and the succession to the throne, with which she was much teased; as to other affairs of state—such as peace, or war, or political transactions with foreign powers—they were matters which did not come within the circle of the authority of the House of Commons. Moreover, liberty of speech, which ought to form the indispensable condition of a free assembly, was, at that period, granted to the delegates of the nation but seldom, and under severe restrictions. It was not an uncommon occurrence for members of the House of Commons to draw on themselves severe visitations of fine and imprisonment, for having made use, in parliament, of expressions displeasing to the crown. Peter de la Mare, who was chosen the first speaker of the House of Commons during the minority of Richard II., experienced a similar fate under Edward III.; and Sir Edward Coke, who, in his capacity of speaker of the house, sought protection of Queen Elizabeth, in the name of the commons, in the year 1592, against imprisonment, for liberty of speech and access to her person, she answered him, through Pickering, keeper of the seal, that she

granted them liberty of speech, but not that liberty which permits every one to say what he pleases, but limits it to mere *yes* or *no*.

The inferiority of the character of the member of parliament in his political office was marked, not only by his utter insignificance in all questions of state, but by those frequent reprimands which they received from minor magistrates, who, when the conduct of the former did not square with their (these magistrates') notions of things, persecuted them with much insolence and severity. We will cite, from among many others, one illustration of such proceedings. A certain Stroda, in the reign of Henry VIII., moved a law relative to the commodity of tin. The authorities of the mines in Cornwall, who were displeased with him on that account, proceeded against him, and condemned in heavy penalties; and in default of the payment of which he was put into chains and imprisoned, and with such severity was he treated as to endanger his life.

The first instance of the growing independence of the commons was exhibited in the stand which the house made on the subject of the imprisonment of its members. Until the year 1542, members of the commons could not be released from prison but by means of an application made to the chancellor. The house now determined that a direct order from their speaker should be the process henceforth to be adopted on those occasions. In 1607, under James I., the jealousy or the self-esteem of the commons was so far roused that one of the members (Sir Edward Sandys) dared to move for the establishing of regular enactments, and the keeping of protocols in the house, which, however, did not work into practice until 1621. These proceedings may in truth be considered as the first and undeniable signs of the security of public liberty.

The very forms and principles observed in the establishment of the commons' house, depended on the circumstances of the increase or decrease of its importance. At first, when the sending of representatives was considered a states-average (for which the members were duly paid), the conditions of the rights of elections were either left to the judgment of the agents of government, or regulated by the ancient customs of the respective districts. More than 150 years elapsed since the establishment of the House of Commons, before the rights of election were confined, in the counties, to landholders whose annual revenue amounted to no less than forty shillings—a sum equivalent to more than the tenfold nominal value of the present day. This regulation occurred in the eighth and tenth years of the reign of Henry VI. Still later, the elections were so openly and exclusively led by government as to show how confidently it

relied upon its own superiority and ascendancy. Under Edward VI., Northumberland issued circulars (in 1152) to the sheriffs, to impress the freeholders with obedience to the royal pleasure, with regard to the candidates who would be recommended to them, either by the government or the local authorities.

A somewhat similar proceeding took place under Elizabeth, when government, or, what was the same, the court, appointed five candidates for every borough, and three for every county, in elections; and when the sheriffs were charged with the duty of procuring the return of the court candidate. In 1604, another step was made in the cause of independence by the new principle which was laid down—namely, that when a seat became vacant in the house of parliament, the house itself, and not the chancellor, as previously, should issue the order for the election of a member. Shaftesbury, however, as late as 1673, endeavoured to restore that right to the chancellor; but the commons had grown bolder and more decided, and gave him a steady and formal repulse; for they annulled the election which had, on this occasion, taken place under the order of the chancellor, and immediately issued their own order for a new one. The interference of some of the peers in the elections of the country was not abolished entirely until the time of Charles I. and the long parliament, when it was formally declared an encroachment on the liberty of the house. Although such and similar measures were not of sufficient authority, as yet, to curb and limit the influence of the crown and the wealthy landholders, which, indeed, became the more corrupt now it was prohibited to revel in the day-light, and driven to carry on its operations by stealth. The ground they gained was valuable, inasmuch as it paved the way for the succeeding age of more enlightened and liberal policy.

Perhaps we ought not to be surprised at the tardy and accidental promulgation of those principles which are the base of the independence of parliament, when we discover that another principle, interwoven with their very substance and dignity, was drawn into operation by force or accident, and, strange as it may appear, even against the will of the parliament itself; we mean that principle which inculcated the general and broad doctrine that the members of parliament were not, in their capacity of national legislators, to confine their thoughts and labours merely to the distinct interest of the sect, district, or class by whom they were elected, or among whom they might reside, but that their own great and paramount object should be the general welfare of the whole community, however that might clash with single and private interests. To the

hasty and impatient politician, and to him who takes for his motto "*things as they are*," it may be consolatory and instructive to know that this lofty principle, of which we have just spoken, did not obtain a footing in the English senate by any exertion or stretch of wisdom of former legislators; on the contrary, it owed its introduction solely to the great and supreme *natural legislator*—the imperious influence of time and necessity.

That law, which was established in the first year of Henry V., and by which no candidate was deemed eligible if he did not domicile, at the time of his election, in the county or borough of his constituents, was rather calculated to reduce the members to the inferior rank of representatives of their constituents alone, and thus narrow their line of action. Happily for the nation, this law was never called into practice; it was even declared by the authorities as impracticable, and eventually necessity and public opinion prevented its application, long before it was formally annulled in the fourteenth year of George III.

The great national advantage which finally accrued from the circumstance of the discountenance which mere party and class representation suffered, was, as far as laymen were concerned, entirely the result of that more rigorous and extensive feudal system to which we have already so often alluded, which centred in the monarch—the supreme fountain-head of power—checked the rise and combinations of particular bodies throughout the country, and prevented the landholders from forming themselves, as elsewhere, into an exclusive caste of knights and nobles; while the exclusion of the clergy from the House of Commons is not less the fruit of *chance*, if we may so term that *pride* which so broadly, and indeed naturally, characterizes the sentiments of distinguished castes.

Hallam (viii., 3) is certainly right in supposing that the clergy, as a distinct class of the nation, formed originally a part of the House of Commons, especially according to the views of Edward I. But the distaste which the clergy always exhibited at being mixed up with laymen, was yet embittered by the differences that existed between the adherents to the common law, and the ecclesiastical courts with their statutes of the canonical and civil rights, as well as by the jealousy with which each party strove to resist and overthrow each proposed law which savoured of the doctrines of the opposite party. Grants of money to the crown were the only affairs in which all parties appeared to participate in one common feeling, that of displeasure. The direct cause which brought on the total exclusion of the clergy from a constitutional share in the manage-

ment of public affairs, was the blind and headlong zeal with which they insisted upon exemption, and particular and exclusive distinctions in society. In the other parts of Europe, the clergy were content with the honour with which they had been invested, in the first rank, in every legislative assembly and council ; while in England the clerical pride was so sensitive (and it proved fortunate and happy for the people that it was so) that it carried them so far as to aim at an absolute separation from the lay members of the House of Commons. By this circumstance a church assembly was gradually formed, distinctly apart from the states assembly, and was usually, under the title of convocation, held simultaneously, but entirely unconnected with the parliament.

From these facts we may fairly infer that the clergy possessed a seat and a vote, as representatives of their ecclesiastical caste, not only in the commons' house of parliament, but also in the lords. This privilege, however, they forfeited, when they separated themselves from the commons' house, and instituted an independent court for themselves. The resignation of their original privilege gradually rendered the possession of a barony, with which William the Conqueror had invested most of the prelates, under the title of *frank almoigns* (free alms), an indispensable condition for their seat in the House of Lords, which was not previously the case. Of the hundred and twenty-two abbots and forty-one priors who had appeared successively in parliament until the time of Edward III., only twenty-five abbots and two priors occur continually the same ; while the names of forty of them occur only once, and of thirty-six more, only five times. The loss of their seats in the house, Hallam properly ascribes to their non-possession of baronies, which had been at first, by mistake or otherwise, overlooked, but had afterwards been taken into serious consideration. Thus we are confirmed in our opinion that the prelates held no longer their seats in the house as representatives of the ecclesiastic class. So early as the time of Henry II., in the parliament of Northampton, we find the bishops insisting thus, *non sedemus hic episcopi, sed barones* (we sit here not as bishops, but as barons). This declaration, which originally conveyed merely a sort of worldly pride, of which the prelates could not wholly divest themselves, tended directly to widen, and that palpably, the distinction between the *lord* and the *prelate*, in one and the same person ; and so deeply had it affected their character in the public estimation, that in the seventh year of the reign of Henry VIII. the whole body of English judges based upon it their decision, viz. that the king is empowered to hold his parliament

with the secular lords and commons, to the exclusion of the bishops, who do not belong to it by reason of their ecclesiastical dignity. Even Charles I., well known for his devotion to the church, admitted, in his declaration of the 17th of June, 1642, but two component parts of parliaments—the secular and spiritual lords in the one house, and the commons in the other. The instance of the Bishop of Man, who, as he does not possess a barony, and of consequence is no lord, cannot hold a seat in parliament, sufficiently attests, even to this day, the spirit and the principle of this question.

In the year 1647, the clergy became aware of the rash and precipitate step which they had taken in withdrawing themselves from the House of Commons, and sought to retrace that step by petitioning to be re-admitted into the house, according to ancient custom; but the error could not be retrieved, and their petition was all too late to produce effect. Nor were they losers in this particular only. The pertinacity with which they insisted upon their ecclesiastic prerogatives, instead of procuring for them the least advantage or compensation for what they had lost in the political circle, actually occasioned the loss of even some civil rights which they originally possessed. It was formerly, after the example of the upper house, where some prelates held seats, not in their right of ecclesiastic dignity, but simply as secular lords, also in the other house for some curates and parsons to sit there, in the capacity of representatives of cities and boroughs. Since the reformation, this practice became less frequent, and ultimately no ecclesiastic, of any grade, was elected to a seat in the commons. Thus we may perceive the gradual extinction of the clergy from the seat of secular and representative legislature. Yet, although the public voice was against them, the clergy were not legally incapacitated until 1804, when a formal act of parliament set at once its seal upon the question, which not only excluded them from the House of Commons, but also interdicted to them the practice of several branches of civil industry, such as farming, commerce, etc.

The same march of seeming casual events which marked the composition of the parliament is not less visible in the history and progress of its sphere of operations. A legislative power, in the true sense of the word, did not originally belong to the barons, even when they alone constituted the sole body of parliament. They merely formed an assembly, under the presidency of the king; and their collective senatorial power extended no farther than as judicial advisers of the great court-of-foes of their liege lord. The laws of

the country never emanated from even this class, except occasionally, when accidental circumstances placed in their hand a temporary strength, of which they certainly did not fail to take advantage, and to dictate laws to their sovereign. Not even the formation of the House of Commons (although it wrought many and great changes in the operations of parliament) rendered them competent for legislation. Their whole power in legislation went no further than merely the tone of advice, recommendation, and, perhaps, occasionally, submissive remonstrance; while the monarch was left entirely to his own free will, to grant or refuse as it might seem to him fit. This condition of legislature continued for centuries, and the royal proclamation was the only supreme law. Sir Edward Coke (inst. iii., 162), it is true, asserts that the royal proclamations had no force or authority but when they were based upon the existing law; but it must be remembered that Sir Edward Coke, contemporary with Elizabeth and the first of the Stuarts, lived also at the time when the law, or rather the spirit which generates law, had taken a new form, and the thoughts of men were engaged in devising the means of limiting the arbitrary power of the sovereign. In the latter days of Coke, the promise of former monarchs was considered binding by law, even to subsequent princes; so much so, that new rights were claimed by the people, as if they were merely the renewal of what had only laid dormant.

On the subject of the original mode of legislation, there can be no doubt but that it emanated solely and independently from the throne. In the reign of Edward III., whose foreign wars compelled him often to dispense with those means calculated to keep up the sovereignty of the throne at home, we find the first traces of real distinction between royal proclamations and parliamentary acts. Indeed, the legislative power of parliament, such as it exists at present, owes its full and extensive force to a few incidents in the fifteenth century. The sphere of the operations of the English House of Commons was for a long time confined—as the *tiers-etat* in the states-general of France—to mere petitions and complaints of grievances (*doléances*), which, in addition to the resolutions of the lords and the replies of the king, served each time as a guide for the judges in the framing of new statutes, soon after the dissolution of each parliament. By such a proceeding, the judges had it entirely in their power to favour the royal will; and that they did so, and in direct opposition to the resolutions of parliament, several instances which occurred under Richard II.—when laws were established apparently based on the resolutions of parliament, but in

fact emanating from the *convocation*—sufficiently testify. Thus, it happened that a law was passed, in 1381, by which the arm of secular justice was to be claimed for the preservation of spiritual orthodoxy. That law had been passed without the consent of the commons: it was certainly revoked at their protest in the next sitting of parliament, but it has not been removed from the statute book even to the present day.

The efforts of the commons to remedy this evil remained ineffectual until, instead of precarious petitions, the more developed spirit of liberty introduced into the house substantial bills of law. The petition of the house then gradually became changed; and in the time of Henry VI., so far had its authority progressed, that the *bills* of the commons were no longer liable to arbitrary caprice, but demanded at once either the direct and positive assent or refusal of the crown upon every clause.

This new order of things, although it told well for public liberty, and appeared to promise a fair share and balance, in the legislative department, to both houses, yet fell far short in realization and the scope of action. The crown, although it could not now proceed, as formerly, according to the impulse of its own imperious will, was nevertheless not prevented in the perpetration of open injustice and arbitrary actions; and, until the time of the Stuarts (the monarchs sheltering themselves under the legal shade of the legislative wisdom of parliament, which always proved a ready pander to their will) evaded every restraint which the parliament had instituted for the regulation of the authority of the crown. Thus, the most oppressive laws were issued from the parliament, which, in the last years of Henry VIII., finally sank into such a fanaticism of submission as to defy, with the exception of the senate under the Cæsars, any parallel in history.

In less than seven years after (from 1536 to 1543), the parliament had delivered up to the whim of Henry VIII. the personal liberty, property, and conscience, of every Englishman; and, lastly, itself, and all its rights and privileges, without the slightest reserve or exception, and converted monarchical fraud and tyranny into public law. The parliament did not scruple to invest that prince with the most unlimited power, not merely on the subject of levies of money or judicial authority; it placed in his hands the arbitrary division of the realm, the investment of lands, dignities, liberties, and privileges of all kinds. It empowered him and his successors to revoke, at pleasure, every act of parliament (before the lapse of 21 years), by royal letters patent. It sanctioned and confirmed in anticipation, as

binding and legal, certain articles of faith, and all those dogmas, whatever they might be, which the clergy in committee were to frame, with the sanction of the crown. Yet further ; it set on an equal value of legality the royal proclamations with acts of parliament ; and in acknowledging the judicial authority of the body of the nine members of the privy council, whose province was the protection of the royal rights, it converted the transient encroachments of the cabinet into standing and positive laws. Indeed, the parliament of this period exhibited the most disgraceful aspect, and no darker page is there in the volume of our history, than that which tells of the eighth Henry and his parliament. The parliament of that time destroyed the buds of constitutional liberty which had, through so many centuries, been fostered with so much care, and might itself have stood on record as the last legislative assembly in England, had not the sovereign himself discovered it to have been a serviceable and convenient instrument for the accomplishment of his several purposes.

Even the common course of judicial proceedings, so sacred to all nations, even in their first stages of civilization, was, during the above period, neither observed or revered ; and whenever the protection of the law was claimed, it was evident that claim was made more for the purpose of gratifying a feeling of revenge than for aught concerning the ends of justice. The ministers of Edward II., and also of Richard II., were not *judged*, but persecuted—the first, without the least interference of the commons, who, in their turn, vented, in like manner, their signal wrath against the mistress and counsellors of Edward III. In the two former cases, the pretended judges were so perfectly aware of the irregularity and injustice of their proceedings, that the lords seized the earliest opportunity of obtaining from Edward II. a formal acquittal of guilt (indemnity) ; whilst the parliament under Richard II. passed the shameful and stultifying resolution, that its proceedings should not be taken as a standard for the courts of justice.

Under Edward III. attempts were made to fix and extend the responsibility of the higher functionaries far beyond the limits assigned by later ages. The parliament, in return for a certain subsidy which they had granted, demanded of the king that he should, on every third day during the sitting of parliament, take upon himself the duties of the higher state functionaries—with the exception of the two royal courts of justice—in order that the latter might be brought to account for the administration of their respective departments. Edward certainly gave his consent to this ; but the wary monarch

acted under a secret reservation, of which, when he had obtained the money he needed, he immediately availed himself, declaring, frankly and openly, that he never intended to keep his promise. Under Richard II., the whole body of the judges passed the resolution, that neither themselves nor the ministers of the crown should be amenable to accusation, or subjective to enquiry, without the consent of the latter; and although this step was, in fact, one of the causes which eventually deprived the unhappy king of his life and throne, it was nevertheless adopted by his immediate successor, Henry IV. The trial of Buckingham in 1626 may be considered as the first judicial proceeding strictly in accordance with the tone of the constitution; and from that period we find the influence and ascendancy of parliament steadily assume that independent and constitutional character for which it has since become so much distinguished: it no longer hesitated to condemn a culpable minister, or permit the crown to retain in its councils individuals who had not the confidence of parliament.

Until the middle of the 17th century, when the state of society in England had undergone a complete revolution, parliament was, in fact, rather a money-supplying than legislative power in the state, and, like most other money-dealers, it was always, more especially at the time of Edward IV., niggardly and narrow-minded in the furnishing of the most necessary supplies, however small in amount: yet, at the same time that the parliament exhibited this parsimonious frugality of spirit on the subject of money, the higher qualities of character were neglected, and the most precious moral treasure; the rights and independence of the nation squandered away with the most lavish and thoughtless insensibility. In these times, the parliament consented to every proposed law, however unjust, which emanated from the government, without the slightest notion of enquiry as to the tendency of its bearing. So utterly unconscious were the people of any thing like a moral feeling of national independence, and so confined their views of their own importance in the political field, that the utmost service which they expected from their representatives was confined to economy in the supplies of money; and, indeed, the one and only spirit which actuated both the people and the House of Commons, in their occasional political struggles, was that of pecuniary restraint to the monarch. The opinion, too, with which the crown considered the parliament, was perfectly in keeping with that of the people: in fact, it was viewed in no other light than merely as a body whose sole province it was to fix the rate of taxes.

Queen Elizabeth even piqued herself upon the merit of convoking parliament as seldom as possible. But Elizabeth was a shrewd and frugal princess, and avoided the parliament through fear of the danger of losing some of her prerogatives, of which she was very tenacious. The state of England in these times resembled, with respect to taxes, that of Turkey, where the sultan, even in the midst of all his power, lacks that one power of levying taxes; and it is to the detriment and injury of the people that it is so. The people in Turkey are left to the merciless oppression of the grasping pachas, who, in their turn, are again plundered by the sultan. In England it compelled the queen to a general traffic in monopolies, commerce, and trades of every kind.

There are few facts in history of more evident truth than the circumstance that England owes its most important rights of liberty, not to the wisdom of her parliament, or the generosity of her king, but solely to the continual need of money in which her princes were ever exposed, in consequence of those expensive wars in which they were incessantly involved with France.

The advantages accruing from those embarrassed circumstances were, in some measure, *forced* upon parliament. That body, for centuries, never dreamt of any legislative scheme beyond that of securing the independence of the treasury of the crown, in direct opposition to its own interests. In the sixth year of Henry IV., parliament not only recalled several investments made previously by the crown, but interdicted, also, the sale of the crown estates, without its own consent, in order, as they said, to enable the king to defray his own expenses, and thus lessen the burden of taxes. The same policy of the people and their representatives, which went to render the crown independent in its revenues, and more especially to enable it to establish, at its own expence, a standing army, gave to Henry VIII. the means of carrying on his enterprize against the cloisters, and the rich possessions attached to the same. The whole revenue of the higher establishments of education in the realm was appropriated, in 1545, to that effect; and that the English universities did not fall before the rapacity of Henry VIII., was more owing to his generosity than the conscientious spirit of the parliament. Happily for the national liberty, the monarchs in general possessed not that *sense* of prudence and economy for which Elizabeth was so celebrated. The thoughtless profusion with which Henry VIII. squandered away his treasures almost as soon as they were collected, worked largely in furthering the growth of English liberty in its most critical and

feeble moment ; and in the long struggle between extravagant inclinations of the monarchs and the economical temper of the parliament, the former fortunately prevailed.

Moreover, the *grants of supplies*, to which the operations of the house were originally confined, and which right was afterwards developed in one of the most essential principles in support of liberty, is as old as the feudal system, which, while it subjected the person of the bondsman to certain services, left his property wholly unattacked—a custom which prevailed so generally throughout the whole of feudal Germany, that no taxes could be raised by the higher direct vassals of the crown from their subjects, the minor landholders, without the consent of their immediate superiors ; a circumstance, which required that all the orders for pecuniary supplies should be couched in terms of *requests*, while the requisition for personal services was signified by terms of command and imperious *order*. Instances are, however, not wanting, in which the liege lord sometimes took the shortest way when opportunity presented itself or his need was urgent, and exacted by force rather than request, and especially so in England, where the royal power was, in the earliest period, more extensive than in any other country, and the kings levied *forced taxes*, when such things were unknown in the other parts of Europe.

The numerous instances of remonstrances and protestations on the part of parliament, particularly under Edward III., against such forced practices of taxation, show distinctly their frequent occurrence, and the cause which finally led to the express law which, in cases of taxation, required the consent of both houses.*

It is worthy of observation, as well as a curious fact in the history of English liberty, that of all the princes of England who wielded the arbitrary sceptre, none trespassed so seldom and so lightly on this delicate point of national feeling—the arbitrary enforcement of taxes—as those of the house of Lancaster, notwithstanding the express decision of the judges of England, which, under Henry VIII., empowered the crown to levy money at pleasure. Perhaps the solution of this point may be found in the faulty title of this family to the throne, which probably rendered these princes chary of standing too prominently opposed to their subjects, or of irritating the national mind by frequent demands of money.

In order, however, to avoid an open breach of ancient customs, recourse was often had to secret and false means of action ; and

* Statute 24th of Edward I., &c., *tallagio non concedendo*.

large sums of money were obtained under the smooth and plausible term of *benevolences*, brought first into use by Edward IV., or by monopolies, the sale of rights and privileges of all sorts, enormous fines, etc., which distinguished the reign of Elizabeth. Henry VIII. took a very direct way for the accomplishment of his purpose: he raised money by means of *forced loans*—a proceeding which, although it was not accompanied by appearances of violence, yet was of insidiously dangerous tendency to the state. The first levy made under that dangerous title dates from 1523, and proved not the last of the kind. Eventually these loans were settled in a regular way, by parliament taking the liability upon itself. In the year 1529 a receipt in full was given by parliament for all the debts incurred during Henry's reign; another was again granted in 1544, with this addition, that all those creditors who had received any money, as payment or part payment, on account of the king, should be called upon to refund the same. No sooner was the king in possession of this last grant than he broke his faith with the nation, and issued, in the same year, an order for a new forced loan.

Against the abuses of monopolies, which gradually grew to a very mischievous height, a decided stand was not made until 1624, when the weight of the grievance becoming sensibly felt throughout the kingdom, it was declared by the nation that every Englishman being at liberty to do as he pleases, provided his actions do not clash with the laws and interests of the state, every restraint to, or interference with, that right, whether emanating from the crown or any other authority, should be considered illegal.

This enactment, although it clearly indicated the advanced state of the public feelings, both as regards monarchical as well as of magisterial tyranny, yet gave evidence of the slow growth of that principle of independence on which is based the public freedom of the present day. The abuse of monopolies was not generally more mischievous and burdensome than that of forced loans; yet it appears that the consideration of the combined questions was too much for the public mind. While the spirit of oppression was arrested in the form of monopoly, it was still suffered to exist in the form of the forced loan, until, under Charles I., it grew to such a palpable and alarming extent as to open the eyes of the dimmest political thinker, and exhibit to the public view the dreary picture of the actual national condition. The circumstance which worked the destruction of the forced loan system, was the resolution of the privy council in the year 1629, which declared that the urgency of public affairs rendered any delay in convoking parliament impossible, and that the king is

compelled to levy a forced loan as an advance and in account of the taxes to be raised in the next session. Whatever was the skill with which the king and his advisers attempted to mask their proceedings, it was signally frustrated; the public mind was roused, a decided national stand was made, and the forced loan system was annihilated by the famous *bill of rights*.

In the forms adopted with regard to the grants of taxes, which rendered it incumbent that the bill for the latter should originate with the House of Commons, and from them be sent for approval or rejection by the lords and the crown, we again trace the accidental influence predominating above the designs of legislators.

A grievous complaint tendered by the commons against the resolution of the lords, which went to the issue of a writ on their own authority, in concert with the king, merely notifying to the commons the simple circumstance, induced Henry IV. (in the ninth year of his reign) to declare the necessity of the lords and commons' reciprocal consultation and decision in the matter of the requisite supplies of which the state might be in need, and that no report should be made on the subject to the crown until it had received the sanction of both houses. Thus may be perceived the cause of what gradually led to exclusive right of the commons to originate and order the taxes—a right which succeeding ages have proved to have been maintained more by the steady perseverance of the commons than the consent of the lords or the good will of the crown. This question was subsequently agitated at York, in the great assembly of peers convoked by Charles I. at that place. Clarendon tells us that one of the members of that class advanced the point, whether the lords alone were not entitled to grant taxes to the king; a question which, we think, would scarcely have been raised, had the right of the commons been so firmly established and so formally acknowledged. Even as late as the year 1671, a further attempt was made by the peers to stem or turn aside that right. In the bill of taxes which was sent to the peers from the lower house, the former proposed to annex some additional clauses, but the latter annulled them by a formal protest; from which period no further attempts were made to dispute with them this, in fact, arrogated right.

It was not until a very late period that the operations of parliament extended themselves to other branches of administration. Soon after the restoration, the need of money in which Charles II. was incessantly involved completed the dependence of the crown on the parliament, at least as far as taxes were concerned. The right of *wardship* and *purveyance*, which had been treated for with James I. and

£200,000 offered as an equivalent, and refused by that prince, were now purchased for the annual sum of £100,000; and an act of parliament of the year 1670 empowered the crown to dispose of the free-farm rents, the last remnant of the old independent revenues of the kings of England. About the same time fell into disuse the form of subsidies: the last are of 1663. Government, however, continued still to receive the necessary supplies for all the departments of administration in general, without parliament ever venturing to specify the amount of the sum to be appropriated to each division separately. The evils arising from such a summary and vague proceeding are sufficiently characterized in the reign of the Stuarts, who appropriated the sums they received to any purposes rather than those for which the money had been raised. The finishing stroke to a complete and consolidated form of government under the jealous eye of parliament, was at length given by the revolution of 1688. From that period a certain sum was granted specifically for the civil list, and the rest of the revenue of the state was appropriated to the expenditure of the several departments of administration, with direct and precise orders for their use; also account to be rendered of the expenditure to both houses of parliament the next session. The best effect to the ameliorations and reforms of the following century, was finally given in 1689, when it was resolved that the grant of taxes should be renewed every year, by the introduction of a new bill each time; a circumstance that rendered all the officers of the administration, receiving salaries, completely dependent on the representatives of the nation.

Thus, by the historical glance we have made, we find the English constitution was for many centuries, and even down to comparatively modern times, nothing more than a sort of confused monarchy, destitute of any thing like fixed rules or regulations. For many centuries the king, barons, clergy, and the people, were ever in discord, elashing against and yielding to one another by turns, according to the force of circumstances. Indeed, the earlier history of England is only a register of revolutions, in which every thing was either in rise or decay, the victorious party always destroying the work of the vanquished. Only in feeble and formless outlines do we see the first sketches of the noble creations of subsequent ages; and in nearly all of them the proof is palpable that chance and accident, even in the profoundest inventions of legislators and politicians, have had more share than the light of human sagacity.

SLAVERY AND THE SLAVE TRADE.

By JAMES ROSCOE.

"Yet, yet, degraded men ! th' expected day,
Which breaks your bitter cup, is far away."—CAMPBELL.

SLAVERY may be defined as the condition of an human being who is the property of another. The existence of such a relation between man and man as this definition implies, is perfectly indefensible on any ground of humanity or justice ; it is utterly and equally opposed to the original dictates of conscience and reason, and to every article in the code of christian morality. For natural and revealed religion agreeing in all things, differ not in this, that they proclaim personal liberty the right of all men, to be forfeited alone on the commission of crime and for the protection of society.

The earliest inspired record of our race informs us that dominion was given by the Creator to man over the fish of the sea and over the fowl of the air, and over every living thing that moveth upon the earth. Man has thus by divine revelation, no less than from the clear intimations of Nature (each a magnificent commentary on the other), an undoubted right to exercise power over the inferior animals ; and full authority is conferred upon him over their liberties and lives, so far as necessity dictates and humanity allows.

For his own use they were formed, and he has a consequent right to appropriate them to his own use accordingly. But that man should create for himself a property in any of his fellow creatures, is not only neither enjoined or permitted by, but is utterly opposed to every standard of morality acknowledged by christians.

Even were a man so degenerate as willingly to become the bondsman of another, it would be but an aggravation of the crime, arising from the wilful insult offered by the slave, through himself, to the Deity, in thus degrading his Maker's image to a level with the brutes.

That of nations is another, and the remaining, law to be considered (more particularly with regard to the manner in which the African slave trade is supplied), and is, indeed, but the spirit of the natural and revealed laws ; consisting in the application of the principles enjoined by them for regulating transactions between individuals, to the intercourse between nations. The key-stone of this system of jurisprudence is stated by good authority to be the

golden maxim of doing unto others as we would be done by ; and slavery involving a manifest and gross violation of this maxim, is, consequently, no less opposed to the law of nations than to the dictates of reason and religion.

Slavery thus evidently being the consequence of an unauthorized exertion of power, and the right of personal liberty being undoubtedly the original privilege of all men, be it ours now to consider whether any tenable grounds exist, on which may be based a denial of this common right to the African—our immediate object of regard. The only justification urged for such an exclusion is an alleged inferiority, consisting in colour of his skin and the weakness of his mental faculties. The former of these allegations of inferiority may seriously and safely be said to resolve itself into what may vulgarly, yet with propriety, be termed a mere matter of taste : at least, that the accident of colour alone does not necessarily involve inferiority, every unprejudiced mind will, I think, acknowledge.

But, admitting now that the intellectual faculties of the negro have as yet proved only by exceptions their susceptibility of that degree of cultivation common among ourselves, I yet utterly deny that such inferiority precludes him, in the remotest degree, from participating in the right of personal freedom—a right universal as humanity ! The folly of an affirmative assertion becomes evident if we imagine the principle it would countenance to be carried out and acted upon generally, thus extending it to all members of our community. A slight deficiency of intellect would then undoubtedly be a sufficient justification for depriving any of its members of their rights as men and citizens !

The principle which appears so absurdly unjust when applied to the case of individuals in this manner, without restriction, when transferred as unrestrictedly to the case of nations, can admit of no palliation ; for, as before stated, the transactions of individuals and nations are subject to the same general rules. How, then, can be justified the practice of making expeditions into the territories of nations, although remarkable for inferiority of intellect, seizing their unoffending inhabitants, and with aggravating circumstances of cruelty conveying them to a distant land, and dooming them for the rest of their lives to a state of hopeless slavery ?

I do not consider it expedient to dwell at any further length on this portion of our subject relative to the inferiority of the African race ; for, thanks be to heaven ! the day is gone by in which it was necessary to counteract opinions such as were once promulgated by

some who attempted to reason down the negroes "to a level with the ourang outangs, or rather the ourangs up to, or above, the negroes." I think there can now be very few, I earnestly hope there may be none, who will not be disposed to admit the possession by the African of every attribute pertaining to an accountable being; his possession of an intellect sufficient for his guidance through this world—of a soul capable of immortal happiness in the next. He is indeed a *negro*, but he is also a *MAN*; and he is not the less a man by being a negro!

"A Briton knows, or, if he knows it not,
The Scriptures placed within his reach, he ought,
That souls have no discriminating hue,
Alike important to their Maker's view;
That none are free from blemish since the fall,
And love divine has paid one price for all."—COWPER.

To prove the illegality of a practice is rarely sufficient alone to raise public indignation against the crime it involves; and the present object being to enlist the sympathies of the public in the cause of the still injured African, would have led the writer to devote a few pages to some account of the cruelties inseparable from the abominable traffic in human flesh which African slavery generates, had not the recent publication of Mr. Fowell Buxton rendered such an account quite superfluous.

His interesting publication has fully informed the public of the present dreadful condition of the slave trade, and proves that "the number (of negroes) annually landed in Cuba, Brazil, &c., is 150,000, being more than the whole draft upon Africa, including the countries where it had ceased, when the slave trade controversy began. Twice as many human beings are now its victims as when Wilberforce and Clarkson entered upon their noble task; and each individual of this increased number, in addition to the horrors which were endured in former times, has to suffer from being crammed up in a narrow space on board a vessel, where accommodation is sacrificed to speed."

It certainly is sufficiently disheartening at first to learn that all our efforts have so utterly failed in extirpating the slave trade, and that, on the contrary, the multitude of human beings annually ravished from their native land has so greatly increased since we ourselves abandoned the hateful traffic.

We may, indeed, congratulate ourselves that the enormous guilt of countenancing a trade in human flesh and blood can no longer be

alleged against our country ; but we are by no means entitled to rest satisfied with this. Much still remains to be done by us towards expiating our share of the crime which colonial slavery and the slave trade involved us in. Nay ! common humanity alone—the regard which we ought to possess for the whole human species—requires that we should only cease our labours when every nation on earth practically acknowledges the sanctity of the negro's home.

The measures hitherto employed for the destruction of the slave trade having *as yet* proved lamentably unsuccessful, a knowledge of the means by which this desirable object may be most speedily attained, and the habitations of the African rendered secure as our own, becomes an important matter of enquiry.

The unfortunate and misguided negroes are themselves the principal agents in entrapping their fellow countrymen, and selling them to the white traders ; and I gather from Mr. Buxton's work, *The Slave Trade*, that it is his intention shortly to offer to the public some suggestions for making the negro "our confederate in the suppression of the slave trade." I trust his scheme, if carried out, will meet with the utmost success of which it is capable ; but at the same time I am inclined to believe (useful and powerful an auxiliary as the negro might prove, according to the promised plan), that we must not for a moment cease to exert our utmost influence over the Portuguese or any other nation directly or indirectly concerned in the illegal traffic, notwithstanding the ill success we have hitherto experienced. Perseverance will work miracles ; and although Mr. Fowell Buxton urges that it is idle to suppose we can, even in half a century, arrive at an universal combination of all nations for the suppression of the slave trade, it is nevertheless a mere matter of speculation that any other scheme, however calculated to be successful, will accomplish it within a shorter period ; and at all events it would be most impolitic to desert any opportunity which presents itself of impressing on the Portuguese and every other nation our unalterable determination to persist in eradicating the traffic ; nor should we relinquish but rather increase our means of capturing the vessels engaged in it. I do not wish to anticipate Mr. Fowell Buxton's plan, and will content myself with relying on public consideration, that it is our bounden duty to exert ourselves in every way which lies in our power for the attainment of entire abolition, and also urging the importance of obtaining the co-operation of other countries for that purpose ; and I doubt not but that Mr. Buxton will readily admit the utility of aiming at this, at the same time that he attempts to carry out his own scheme.

But, in the first place, to secure the success of any plan, we must ourselves be thoroughly pervaded by a determined spirit of doing all that lies in our power towards exterminating this shame of our globe. Let societies be formed throughout the country by all who are interested in the sacred cause of humanity. Such a spirit as these societies would be calculated to keep in permanent and constant existence would, through the medium of a metropolitan committee, conveying the general voice, stimulate successive governments to seize hold with energy of every opportunity which our constant political dealings with other nations may present, and would urge them to make it an invariable condition of every negotiation that the nation in question shall thenceforth neither directly or indirectly countenance the slave trade. Many opportunities of this nature will necessarily arise, in which our nation would, I think, from its great and extensive influence, be enabled to effect a certain though gradual diminution, and final extirpation, of the evil complained of; for, although faith might still, for a time be broken with us, as it has hitherto been, and the trade secretly carried on or indirectly encouraged, yet I am inclined to believe that a persevering imposition of these conditions, and following up the breach of them as effectively as possible, must finally have the desired effect; and at the least must greatly aid any other plan which may be deemed competent to work out a speedier and more effectual defence for African liberty and peace. The great abhorrence which would thus manifestly and repeatedly be exhibited by us, would certainly have some, and probably a growing, weight on other governments, and might induce them ere very long to enter into our views to a certain extent; and it is not impossible that it may also render their more enlightened inhabitants willing to assist us, in some degree, in carrying out our wishes. Far be it from me to oppose the introduction of any feasible plan for the abolition of the slave trade; I only desire that what may, after all, prove the main prop, and can never cease to be a considerable support, shall neither be wholly or partially abandoned.

The struggle seems likely to prove a protracted one; and societies (as now suggested) may be found useful in keeping up a necessary share of public attention on the subject, throughout its progress.

It is sufficient for my present object to throw out these remarks, for the purpose of aiding in attracting public attention to the very important subject from the consideration of which they arise. To the strong feeling of the British public, continually acting on

the government, and strenuously pressing upon it the adoption of every plan holding out a promise of success, we must look, as containing the germ of African peace, liberty, and happiness. Forsaken by us, the African becomes a brutalized, degraded, and heart-broken creature ; succoured by us, he may yet attain the rank and rights of a man, the feelings and hopes of a christian.

Let us, then, in every manner which may present itself, endeavour to expedite the good work of emancipating our fellow men from their liability to cruelty and oppression. Let us keep ever in mind the wrongs and sufferings which so many of our sable brethren still undergo. But surely there is *ONE* who will not desert the creatures whom he has formed ! Then let us not be discouraged, or suffer the existing heart-rending state of the Slave Trade to prompt us to consider the ever-hallowed cause of humanity as hopeless ; and that further endeavours to assert or assist it must be in vain. The opportunity is still afforded you, the English people, of bursting the "Libyan's adamantine bands," and do not reject it !

Consider the fearful agonies which thousands of human beings are at this very moment undergoing in some pestilential slave ship, whose abhorred and gloomy shape moves heavily with its guilty load over the abyss of waters. Stowed to suffocation within its hold, human beings of both sexes are placed, with the most hateful and abominable disregard of every decency, in constant and disgusting contiguity ; thus to remain for many weary weeks, unless released from present misery and future woe by a merciful Providence. Thus are many of your fellow creatures suffering, men in their agony biting the flesh of those around them ; women growing raving mad for the want of God's commonest luxury, a draught of water ; while the helpless cry of the just-born child, and the expiring groan of the adult mingle in horrible chorus ! the dead and the living chained together ; while you, perhaps, in ease and affluence, are enjoying all the many blessings which a bountiful Providence has vouchsafed so largely to bestow on this, our favoured native land. Let, then, these very blessings be but as so many inducements, prompting the display of your gratitude to the Divine Giver, by succouring the creatures whom he has formed !

That Being, most merciful and compassionate, whose divine perfections for our imitation and love are chronicled in the pages of the New Testament, has invoked blessings on him who, in His name, shall render even the slightest benefit to a fellow creature. And have we not now a noble and illustrious opportunity of evincing our gratitude to Him who suffered for us all, by thus obeying his in-

junction of doing good? The African was assuredly not excluded from the universal precept!

A recent and valuable publication, before alluded to, renders it quite unnecessary for me to dwell on scenes of misery and suffering whose very mention harrows up the soul, and makes the blood boil with indignation. In the contemplation of these scenes, man (too often attributing to the Deity the same feelings which influence himself) may perhaps be pardoned for marvelling, for a moment, that the Everlasting Arms are not stretched forth, that the Omnipotence of Destruction is not terribly revealed, at the cost of those who commit such enormous outrages against humanity!

In conclusion, it would seem that to the public feeling of our country alone, in the first instance, (which, not now deficient, must not be suffered to grow torpid), is the final extirpation of this unnatural traffic—offensive to God and hateful to man—to be attributed; and although it is very possible that we may not live to see the accomplishment of African redemption, yet it is not the less our duty to assist in the good work because we may not behold the fruits of our labours. And even now, in some degree, “prophetic hope” may recompense our toils, by pointing out what we may rationally expect as the effect of our exertions, if prospered (as we trust) by Heaven.

We may thus look forward to a time when the tribes of Africa, no longer molested by traders in human flesh, shall establish a friendly intercourse with more civilized nations; when, education and religion exerting their combined influence over the mind of the now untutored savage, he shall become equally intelligent with the inhabitants of other lands (for who will venture to circumscribe the bounds of intellect? who will dare to mark the limits of improvement in any human mind?); when populous cities shall arise, and all the blessings of civilisation shall have taken ineradicable root in the land of the now degraded negro; and when he himself, fearless of thralldom, shall walk a free man on his native soil, with erect front and unquailing eye, equally conscious of his own proper dignity as a man, of his present duty and future hopes as a christian.

When these remarkable, but by no means improbable, results shall have taken place, the grass may have often flourished and faded over the spot where our neglected bones are laid. Yes! we may be dead, our names unknown, our sorrows and our joys blotted out of earth for ever. But even then the spirit of us, although dead, will be abroad and mighty in the world. We may die, but our exertions are immortal; their effects will be felt in ages and by

generations when we ourselves shall be utterly forgotten. Then let us not be idle, seeing so much is in our power; let us, therefore, endeavour to hasten the advent of that day which is to crown our labours with a glorious success. If it never comes—if the African race are destined, tribe after tribe, to disappear from the earth, let us still remember that there is a BEING whose mercies are over all his works, whom we, in being just and merciful, imitate; who fails not to recompense—the God of the white man and the black!

AN ESSAY ON THE EXPEDIENCY AND MEANS OF ELEVATING THE PROFESSION OF THE EDU- CATOR IN THE ESTIMATION OF THE PUBLIC.*

CHAPTER VI.

THE EDUCATIVE OFFICE CONSIDERED IN ITS JUST ELEVATION, AND THE CONSEQUENCES UPON THE EDUCATOR, THE SCHOLAR, AND THE NATION.

THE antithesis of the foregoing argument is the just and essential elevation of the educative office, and its consequences. Whatever can be said of the worth and dignity of the highest secular professions is transcended by the office of the educator, which, as it essentially ranks above, so is it the producer and conservator of, every other profession.† The dignity of the senator and the judge, the advocate and the physician, should be rather contributive to the office of the educator than excised from and independent of it, for the several learned professions owe both their learning and import-

* Continued from page 128.

† "Education is, in truth, the first concern of society, and it ought to have the energies of society's best minds. The Athenians, who had glimpses of whatever was most glorious, did in this matter leave mankind a great example. Teaching was the honourable occupation of their greatest men. The brightest minds of Athenian philosophy were the instructors of Athenian youth; so keenly was the truth felt that the mature intelligence and moral power could perform no higher function than that of rearing up the same precious fruits in the rising minds of the community."—*The Educator*, page 83, 84.

ance to the educative office ; and though learning may be fetched from a source morally impure, the honour and integrity of the professions, and the utility of their application, can be derived only from a more dignified profession and system of education. The integrity of trade is far less important to society than the integrity of the professions ; for the loss from the former is merely pecuniary and partial, while its transactions are subject to examination ; but the integrity* of a minister, a senator, a judge, advocate, physician, or lawyer, involves the life, possessions, and happiness of mankind. How infinitely more important, then, that their professions, raised almost above scrutiny, should be worthy of public confidence, by a rigid and educated intellectual and moral integrity. The profession of the educator can alone discipline and cultivate the mind for these important offices ; and according as this primary operation is elevated or depressed, will the several professions be useful or detrimental to mankind. But the character of the learned professions is further important to society, that the inferior vocations of life are all influenced by their example. It is the corruption of the higher duties which deteriorates and taints the whole scale of the commercial world, and, by a striking and vivid example holds out a general inducement and patronage of evil. But the elevation of the first and formative office—the educative—must be followed by the elevation of every other profession and trade. The moral tone of society being given from the first perceptions of the infant mind, will pervade the whole social frame, and grow up into an universal harmony and fellowship of virtue.

The elevation of the profession of the educator must be co-existent with the elevated capacity and character of the educator.† The direct consequence of the elevation of the office will be the national attention to the suitability of the master. This care will act in both parties, to the greater benefit of the office. As the nation, through its representatives, will be severe in judging of the educator, he will not dare to meet their opinion, unless conscious of his qualifications and meetness for the duties of the office ; a jealous scrutiny on the part of the electors will deter unable men from intruding themselves, and usurping the highest dignity of the state. All parties

* The word "integrity" here means the moral and intellectual fitness for the offices, more than the pecuniary honesty.

† "The intrinsic value of our cause is great. It requires an uncommon elevation of heart, singleness of sight, absolute submission to the guidance of Providence, indefatigable exertion, undaunted courage, constant self-denial, the humility of love, and the strength of heroes."—*Pestalossi*.

will be vigilant over the interest of schools, for the interest of every individual will be concerned in their success. This constant public scrutiny and veneration of the office will securely guard its duties from injury and degradation. The educator will shrink from so severe and honourable a profession, unless he possess the highest moral and intellectual endowments. A new strife will be given to men, the emulation of goodness and intelligence; a new order of men will spring up for a new government, to dispose and guide the moral and intellectual character of a nation. "When a people shall learn that its greatest benefactors and most important members are men devoted to the liberal instruction of all its classes, to the work of raising to life its buried intellect, it will have opened to itself the path of true glory. To teach, whether by word or action, is the highest function on earth."* And this sublime lesson the people *will* learn, and having once learned will establish. The educator, ennobled by his profession, distinguished for his success, illustrious from his personal character, will be looked upon with veneration and gratitude; he will feel the nobility of his office, that from his efforts the intellect of a people is to be raised from an insensible apathy and corruption, to an active and vital principle of intelligence and virtue. There will be no littleness in his views, no contraction of character, no plea of expediency, to hide the weakness and meanness of his own mind. His office, like the eye of heaven, culminates over him; with its moral altitude he compares his own character, his responsibility, and his success; he admits of no decadence, no fixed point of excellence to repose upon. He is the high priest of God, and the "minister and interpreter of nature;" the mediator between mind and matter, between the law and functions of the physical world, and the moral and abstract law of the rational world. His office is pre-eminent in dignity, for his duties are universal in their results. He is not the mere teacher of particulars, but the inducer, correcter, and exemplar of intelligence and virtue; his first principle is love, on that he raises the moral superstructure of his plan. Parents will behold the master's efforts with deep veneration, and thus, from the cradle, will train up their children to a confident prepossession and love of their future teacher and guide. The scholar thus reflects the second consequence of the elevation of the office. The principle of fear being no longer the attachment between the master and the scholars, that repugnance to schools which children now manifest, will be removed; the tran-

* Channing.

sition between home and school will be looked at more as a pleasing novelty, when the opinion of parents no longer makes school a threat and penalty to their children, even before they know the meaning and object of school. The innate inquisitiveness of children makes them curious of knowledge, which, by a natural philosophy, they love and seek after; and when the tyranny of the teacher is abolished, and instruction begun and carried on in love and mutual delight, the play-ground will offer no greater pleasure than the school-room, but each by turns will claim their attention and interest. The easy and pleasing process of instruction will overcome the most unruly and frivolous temper, and infuse into the general mind of the children that amenity and tolerance, which will be carried out into the active spontaneous conduct of each individually, in their sports and games. The master, no longer dreaded as a spy upon them, will become one of themselves, living among them as an elder playmate, aiding and encouraging them in all their plays, under that golden rule "let all be kept in innocence;" exerting, by the silent and irresistible law of love, a constant but imperceptive rule over their thinking and conduct.* The first teaching must be of things, spontaneous and involuntary; the next stage is the inquisitive, when children observe and wonder: this is followed by the comparison of things, to a reflection on their natures and uses; opinions next succeed, up to the teaching of ideas and abstract calculation; ascending to the utmost efforts of pure reflection. Such is the order of nature, that the first spontaneous education of the visible world should be continuous with the highest intellectual

* "Yede gute Menschenerziehung fordert, dass das Mutteraug in der Wohnstube täglich und stündlich yede Veränderung des Seelenzustandes ihres Kindes mit Sicherheit in seinem Auge, auf seinem Munde und seiner Stirne lese. Sic forderte wesentlich, dass die Kraft des Erziehers reine, und durch das Daseyn des ganzen Umfangs der Häuslichen Verhältnisse allgemein belebte Vaterkraft sey. Hierauf baute ich. Dass mein Herz an meinen Kindern hange, dass ihr Glück mein Glück, ihre Freude meine Freude sey, das sollten meine Kinder vom frühen Morgen bis an den späten Abend, in jedem Augenblick auf meiner Stirne sehen und auf meinen Lippen ahnden."—*Pestalossi*. "A good education demands that in the parlour the maternal eye, unobserved, shall read in the features of her child every change and condition of his mind. It essentially demands the entire energies of the educator, and that the paternal influence may animate the whole compass of the domestic relations. Hereupon I built: that my heart be linked to my children, that their happiness be my happiness, their joy my joy, that every moment, from early morning until evening's latest hour, my children should see it on my forehead and upon my lips."

abstraction. The love of learning should, therefore, be as natural to man as the growth of his body, or the succession of his years from infancy to age ; so that the body and soul may be mutually and sympathetically agreed in their purposes and dispositions, and that every pleasurable sensation or idea should be consistent with their mutual good. The faults of education are neither in the child nor in the learning, but in the master who teaches, and to him belong all the ill tempers and dispositions of children, and their vicious conduct when they become men.

" Yet some will say that children, of nature, love pastime and mistake learning ; because, in their kind, the one is easy and pleasant, the other hard and wearisome ; which is an opinion not so true as some men ween. For the matter lieth not in the disposition of them that be young, as in the order and manner of bringing up by them that be old ; nor yet in the difference of learning and pastime. Beat a child if he dance not well, and cherish him though he learn not well, you shall have him unwilling to go to dance, and glad to go to his book ; knock him always when he draweth his shaft ill, and favour him though he fault at his book, you shall have him very loth to be in the field, and very willing to go to school. Yea, I say more, and not of myself, but by the judgment of those from whom few wise men will gladly dissent ; that if ever the nature of man be given at any time more than another to receive goodness, it is in innocency of young years, before that experience of evil have taken root in him."* The responsibility of the educator, therefore, is not only personal, but national, because every child will in manhood exhibit and promulgate the conduct and opinion to which his early education has led. But this responsibility, under the present degraded state of the profession of educating and its duties, is rightly shifted off the educator to be a curse and retaliation upon the nation, by whose sinful neglect and abuse of the office every social evil has been caused.

The reformed process of teaching, with a wise and more suitable education, will be a third consequence of the elevation of the profession of the educator. As soon as the profession of the educator assumes its right and legal station and claim, it will become an irresponsible dictator over society. By a general consent, the office will be recognized as the arbiter of the social fashions, opinions will originate in a disciplined understanding, not be merely lent from one to another. The educative system will be restored

* Ascham's *First Book of Teaching the Bringing-up of Youth*, p. 216.

to its proper character, not made subservient to the meretricious accomplishments of a vicious and ignorant people, who pull down the principle and body of true virtue, to set up in its place the gaudy, unprincipled, mock virtues of "propriety" and "good breeding," in which are included modifications of every crime. The elevation of the educative function will become the charter of moral freedom, and the nation will learn and confess "that to educate is something more than to teach those elements of knowledge which are needed to get a subsistence. It is to exercise and call out the higher faculties and affections of a human being." The education of the feelings is the high privilege of the educator: to correct the faults, to encourage the virtues, and to solicit the confidence and obedience of children, is the first and last lesson in educating. As the education of the feelings begins with the master, so it must be carried on by the studies; the quality and species of learning must not, from its unfitness to particular dispositions, constrain and irritate the mind, but must be chosen and adapted accordingly. The elements of learning—in the attainment of which so many years are now unnecessarily thrown away—will be taught by the easier process of signs and things; and the practice of oral instruction will take the place of the present drudging plan of mere "book learning," not tediously, but with a willing mind. The accomplishments, now so abused in character and purpose, as music, dancing, drawing, gymnastics, &c., will become delightful instruments in perfecting and harmonizing the character of man, bringing up the "*cui bono*" of the mere utilitarian to making every thing good, and every thing contributive to the moral dignity and happiness of man. Succeeding generations will become incipient teachers to their children; the indulgences of home will be not less the indulgences of school, and the discipline of school will not be less the government of home. The vicious and fatal custom of rewards and punishments will be abolished, or limited to the reproof and displeasure of the master, and the practical disapprobation of the scholars. Severe penalties beget greater crimes, not only with men, but with children. The rod is a sure sign of a degraded office, an unskilful master, and a corrupt scholar. The stripes given in childhood reappear in the memory of age; the pain ceases with the blow, but the degradation is an imperishable scar, a record kept by the soul in revenge of its abused dignity. The penalty of "tasks"—another of the injurious follies of the present educative plan, which, in each single instance, causes more hate to learning than the regular drudging of years—this monstrous evil cannot exist in the uniform

scheme of a reformed education, or, if there be a "task," rather shall it be sought in the "play-ground," and in the solitary and isolated exile from the common harmony and confederacy of the scholars. The constrained difference of pursuit from the community is, perhaps, the greatest of penalties; worse than the noiseless solitude of the desert. The offender walks as a shadow in the midst of mankind; the social laws are suspended; he has no moral life but in the past. Such a banishment is perhaps the most refined penalty, one which never ceases to act in its first force, from the ever-visible surrounding contrast. Teachers have always availed themselves of this punishment, but, unhappily, have applied it on the wrong side; for it is better that solitary idleness should be made a penalty than learning, because nature will remedy the evil of the former, but not of the latter punishment. The education of children, will, therefore, be adapted to nature; every school will be furnished with the scheme of nature; turned and accommodated to suit the talents and dispositions of the scholars; and, by a natural and wise plan of teaching, the physical and moral laws will be acting harmonically, producing none of those melancholy results, of disease to the body, with a mind precocious in youth and imbecile in manhood, thus treading on the heel of time, to the abuse and injustice of an immutable law of succession. The master will walk side by side with the laws of God, and so blend the art of teaching with the natural developments and faculties of the body and mind, as to cause neither pain nor repugnance; for this is the end of all philosophies, "to incline the 'spirit and the flesh' to the same conclusion of virtue and happiness." Adequately to contemplate the consequences of the elevation of the educative office upon the nation, would exhaust volumes; for in the comparisons and relations on the subject every argument, religious, moral, and political, would be called to illustrate the efficacy and importance of a wise popular education. A necessary consequence of an informed mind is an independent judgment and opinion, which tends to the separation of sects and parties, but to a greater diversity and toleration of opinion among individuals. If what is now called *public opinion* were carefully analyzed, it would be found to be none other than a tacit assent to, and blind credulity in, the opinion of some one or more individuals, who, under those general baits and catch terms, religion and liberty, promulgate their own particular opinions and egregious fancies, to the serious injury both of religion and liberty. The fanaticism and superstition which has so frequently shaken the christian church, has been owing principally to the ignorance and

credulity of the people. Encouraged by the ready support and easy success which schism has ever met with, fanaticism or ambition, under the passion and plea of religion, have by turns set up a standard of revolt, and were soon rewarded by the seduction of a number of thoughtless and frivolous people, who, thereby deriving a novel importance and power, settled into a new and authoritative church itself, hereafter to become the victim of similar secessions. Thus every schism has begotten schism, until, like that Indian tree whose branches take a separate root, the christian church, which should be one and homogeneous, is divided into numberless sects and parties; and while professing to worship the same Deity, and to adopt the same faith, they exhibit the fierce enmities of a divided competitive interest, and anathematize each other "as the unclean thing." Thus a religion of peace is made to work even worse results than the strife and tyrannies of secular governments; for bigotry and intolerance are never so inexorable as in the support and defence of mere opinion and blind faith. To educate the people to a wiser life and conduct is, therefore, to make every man an arbiter of the truth, trained up to a controversy with error, that if opinions be multiplied in individuals, extravagant fanaticism, will be extinguished. Thus pure and undefiled religion will assume her divine complexion and character, and the church be re-embodied into the one and indivisible ark, and her altar the ever-approachable mercy-seat of the divine love. Education is the invaluable hostage of government. Looking through the history of nations, the prominent cause of popular outbreaks and civil wars is found to be belligerent factions or individuals. A family or an individual form the nucleus of a party. The most trifling quarrels, in the first instance, limited to themselves, and whom alone it concerned, after the lapse of years, and when the cause of the feud is no longer remembered, the prejudice is communicated from one to another, and even transmitted through generations, extending and strengthening in proportion to the ignorance of the original dispute, until a whole nation is involved in fierce hostility. The influence upon a people is contagious; it is a distemper, not an opinion. A general impression is caught from the general tendency and inclination; but as for any rational argument and opinion the multitude, as a mass, are totally free. Thus, a mob is the "raw material" of the democrat and revolutionist, to work into operation their fatal schemes. There is no thinking in a mob; they listen and catch the plague of words with a simultaneousness that allows no respite for reflection.

Against the dangerous influence of political brawlers, there is no

security but national education. As every man of an intelligent and thinking mind will be self-actuated, there will be no longer a "mob" when men can respect their own opinion and judgment.* It is among the educated part of the population that governments look for support and defence; by extending, therefore, the same virtue and governing principle to a whole people, the authority of government is proportionably settled and fortified: for what is predicable of one man in this respect, is equally true of all mankind, and to educate a whole nation is to elevate its moral power and authority, to extend its dominions, and to augment its wealth. Not only will the general character of the nation be ameliorated through each individual, but thereby the circumstances and relative condition of individuals separately, for there is nothing so provident as knowledge. National education will give a new and stirring impulse to the sciences and arts; and those rich mines of truth that are now covered over and hid by ignorance and the filth of sensualism, will be opened and explored by human intellect. "Learning teacheth more in one year than experience in twenty; and learning teacheth safely, when experience maketh more miserable and wise. He hazardeth sore that waxeth wise by experience. An unhappy master is he that is made cunning by many shipwrecks, a miserable merchant that is neither rich nor wise but after some bankrupts. It is a costly wisdom that is bought by experience, and as Erasmus wisely says, 'experience is the common school-house of fools and ill men.'"[†] But experience is the only education to be gained by the multitude, without a national provision; thus the period of life is spent before men know how to live, and life, that should be the

* "There is, indeed, a doctrine of another kind—a doctrine which would teach us that the tranquility of society is only to be maintained by the ignorance of the people; which doctrine, for the sake of the *few*, would consign all the rest of mankind to barbarity and gloom; and which would purchase the gross repose of rank and affluence by the sacrifice of all the qualities of immortal men. To such a doctrine I need not reply. It is replied to by every heart that is akin to humanity. It is replied to in deeper tones by the history of the world."—"With what facility the demagogue and the hypocrite may act upon the minds of an untutored people, and to what lengths of savage cruelty they can go, when they burst the only fetters that restrain them! The perfection of society is united with the perfection of the individual; to improve the lower ranks is to give stability to the higher. The peace of a nation can never be so securely trusted as in the hands of those who share in its prosperity, who are capable of knowing both their rights and their duties."—*Alison's Sermons*, vol I, p. 205-6.

† Ascham.

practise of a wise and virtuous education, is exhausted in speculative trials and vain conceits. Education anticipates and prevents disappointment; for it bestows upon the mind a prescience of the future by a comparison of the past. The ignorant have no comparison but their own sufferings and defeated plans; and the greater the experience, is often the greater the folly, by narrowing the mind within the limits of a few trivial and prejudiced ideas. Commerce or trading sustains no small harm from the want of a national education; an absence of that comprehensiveness, which is the experience of inductive reasoning from general principles applied to particulars, throws the generality of persons into a venture and loose speculation often ending in ruin; while a few who possess this *forecast of mind* accumulate so vast a proportion of the public wealth as no one should justly hold, since it places both the government and the kingdom in a position of subserviency. This inequality of wealth, among a thousand other evils of an ignorant and vicious people, has established the law of superiority and inferiority, not only relative to itself in the individual, but to the occupations of men, so as to degrade one, and elevate another, without any reference to the public utility of either. This exclusiveness fixes a law of caste upon society, causing a more cruel moral bondage and diversity of mankind than the most inexorable edict of a tyrannous ruler. Every office or labour is amenable to this arbitrary law of opinion; it matters little what may be the intrinsic importance of each, the stigmatizing comparison is reflected from the most dignified to the meanest occupation, pressing more heavily upon every inferior point in the social scale. The ministers of the state, the members of the professions, condescend to each other in a nicely regulated degree; the merchant receives the same humiliation and communicates it to the shopkeeper, who, in his turn, looks down with infinite contempt upon his opposite neighbour; and thus, through almost insensible shades, the law of "high and low" is affixed as a conventional statute upon all the occupations of life. The only possible substitute for this inferiority of rank, admitted by social intolerance, is wealth, and thereby the ironical definition of the satirist is ratified, "that worth means wealth, and wisdom the art of acquiring it." Thus every feeling of integrity is merged in the ravenous lust after riches—that preponderating passion, that oversets every worthy and laudable motive and conduct, and involves all mankind in a perpetual warfare. National education is the catholicon for this aggravating evil; for the arbitrary laws of society can be annulled only by the *intellect* of society; know-

ledge universally extended will give to every rule and opinion its just value and estimation, and by the verdict of the community the imperious disintegrating law of rank, when unsupported by adequate virtue and talents, will be repudiated, as a hurtful restraint to the offices and duties of life.

In whatever position and phasis the subject of education be regarded, its value will be vividly apparent. Not only will religion gain a new and simultaneous spirit, but every external moral effort will be strengthened by the internal moral perception of the people. All those long-tried and various plans of the philanthropist, to remedy the sufferings and correct the vices of mankind, will be actuated by an irresistible ally, when knowledge has preceded and humanized the disposition and mind of men. But, unless education be a *national* and *imperative* law, *itself* becomes an agent of many evils; the pride of intellect, so frequently urged, depends upon its scarcity and partiality; and that humility and self-knowledge which should be the natural result of intelligence, is lost by the too striking contrasts with surrounding ignorance. The arrogance and evil of a little learning can only be corrected by making learning common. "Those, if there are now any, who argue against the expediency of universal education, are not deserving of an answer. Those who, admitting this, maintain that the supply of education should, like other articles of industry, be left to follow the demand, forget that demand and supply are necessarily co-existent and co-extensive; that it is education which creates the want, which education only can satisfy."* The necessary induction is, the impossibility of a national education without legislative coercion. "Those who contend that the creation and supply of the demand should be abandoned by the state to private intelligence and philanthropy, are contradicted both by reasoning and fact. Even those who argue that the instruction of the higher orders should be left free to private competition, still admit that the interference of the state is necessary to insure the education of the lower. All experience demonstrates this. No countries present a more remarkable contrast in this respect than England and Germany. In the former, the state has done nothing for the education of the people, and private benevolence more than has been attempted elsewhere; in the latter, government has done every thing, and left to private benevolence almost nothing to effect. The English people are, however, the lowest, the German people the highest, in the scale of knowledge.

* *Edinburgh Review*, vol. 57.

All that Scotland enjoys of popular education above the other kingdoms of the British empire, she owes to the state ; and among the principalities of Germany, from Prussia down to Hesse Cassel, education is uniformly found to prosper exactly in proportion to the extent of interference and to the unremitted watchfulness of government."* The government of England owes a heavy and overwhelming debt to the nation, no less than the restoration of a whole people from ignorance and vice. The responsibility is tremendous ; for as an ignorant man is in the position of a madman or a child, the sins of that man fly back in the face of those who have brought him up, and left him in the darkness of his reason. The high privileges of this country but aggravate the folly and inertness of her legislators ; while other nations may contemplate with awe the distinguished eminence of this christian land, yet, looking narrowly into the institutions, should see them corrupt and rotting, and her people ignorant and vicious, might hasten away with fearful forebodings of her sudden overthrow ; for the power and majesty of a kingdom cannot be founded upon the genius of individuals, however transcendent, nor upon the most just and vigorous administration of law, but upon the religious, intellectual, and physical character and endowments of the people.

The "expediency of elevating the profession of the educator" is the natural conclusion of these arguments ; and if the exaltation of the office to so high a dignity be not at once practicable, the fault must be placed in the inefficiency, not in the impossibility, of the attempt, otherwise expediency will step in, and drag the office from its safe-standing eminence down lower and lower, till it fall again to its present worthless and prostrate state. Education is the subjector, not the subject, of man, and its office is the virtue of its authority. What is true in theory is true in practice, though not always practicable ; if, therefore, the office and its relations cannot at first be lifted up to its just station in society, the theory or just claim to that elevation and rank cannot be invalidated without the destruction of its authority.

* *Edinburgh Review*, vol. 57.

PART II.

THE MEANS OF ELEVATING THE PROFESSION OF THE EDUCATOR
IN PUBLIC ESTIMATION.

CHAPTER I.

BY THE INSTITUTION OF A NATIONAL SYSTEM OF EDUCATION.

"THE honours of a government direct the esteem of a people." This axiom of the philosopher is plainly illustrative of the subject in question. The means of elevating the profession of the educator can be found only in the esteem in which education is held by government. In a country proverbial for its religious sectarianism and political factions, where a fastidious stickling for the liberty of private opinion has created an universal bigotry and intolerance of private authority and interference, where an hereditary obedience to government has given an almost absolute power to the legislature, "the esteem of the people will be entirely directed by the honours of government." To elevate the office of the educator, education must first be a national consideration; unlike any other office, its dignity can spring only from the dignity of its duties, and to make those duties corresponsive with their utility, education must be formed into a regular and consistent science, enforced and dignified by the honour and patronage of government; to attempt any partial restoration of the office by a less authority than that of the state would end, like every other similar scheme, in disappointment and ruin. Education is not a scheme to be patched up into a seeming propriety by any sect or party; nothing less than a complete and perfect national investigation and modelling of education into a legislative law, can retain it in operation for long, or that will meet with the support and compliance of the public. A national education must be *whole, impartial, and compulsory*.

The many fashions in which education is dressed in the numerous schools in England, cannot fail to be hurtful both to the science of education, and to the improvement of the scholar. "Systems," as they are called, vary with every master, not only in the qualities and extent of the knowledge taught in each school, but also as to the mode of instruction, both personal and scholastic. One school is celebrated for its classical character, another for its professed scientific character, a third for "commercial" excellence, a fourth is

notorious for its religious tendency, while a fifth appears in all the finery of a modern beau, professing to teach all the accomplishments of good breeding, with the whole mummery of a fashionable establishment. The "free schools," as they are called, are free only in name; education is mostly limited to the mere college *formula*; so that the classics are stuffed into the heads of the poor and rich pupils indiscriminately, which kind of knowledge, however excellent in itself, is not the most suitable to the future wants and business of the poor and labouring man; also the number of scholars admitted is quite unproportioned to the wants of the public, and thus surrenders to the master an authority and choice, which no schoolmaster should possess. Endowed schools of every description, whether public or private, are, from their nature, liable to abuses of the worst kind, and which nothing less than a commission of enquiry from the court of chancery can discover. Not less than a million and half* of money is yearly appropriated to school charities, with what benefit to the people is easily appreciated by inspecting the statistics of education and the calendar of crime. The whole scheme of a national education might be instituted and supported at half the income of these corrupted and mal-administered charities.† "So far as we are enabled to form a judgment, there would be no difficulty whatever in immediately providing by law for the cheaper and more effectual administration of charities so far as the funds are concerned. All the difficulties and defects in the present administration of them, might be and ought to be remedied before many sessions are over. Indeed, the suggestions contained in the evidence before the select committee seem to point out pretty fully the remedies. The first enactment might not possibly provide for all cases, but the experience of a few years would indicate the necessary amendments."

A national education, properly adapted to the people, would undoubtedly be the surest way of correcting, or rather abolishing, the abuses of charity schools; the superiority of the national scheme over every other would soon be appreciated, so as to leave the funds unemployed, and at the disposal of the legislature, or the education of private and public charities must rise to an equal excellence with that of the national schools. A national education, like Aaron's

* "Nearer two millions than fifteen hundred thousand."—See *Edinburgh Review*, vol. xxx., page 493; also *The Speech of H. Brougham, Esq. M.P.*, 1818, on the *Education of the Poor and Charitable Abuses*.

† See second publication of the Central Society of Education, page 84.

rod, would swallow up every other inferior and inefficient system ; for education must rise with the universal opinion of such a necessity. That the systems of the Lancaster and Bell schools are defective and unpossessed of the public esteem is sufficiently evident ; both those establishments are practical illustrations that education, to be national, must be altogether national, without any reference to parties, or individuals, or particular systems ; for there can exist no rivalry in education without a mutual injury and defect. Education, in fact, must be *whole* and complete. The inefficiency of every other, of a secular or spiritual character, to elevate the moral and intellectual character of the people, is painfully evident. "A large part of the community are not awake to the importance of the general question of education, which, briefly expressed, is the forming of the moral and intellectual character of the nation ; the moral having, as we view it here (independent of the particular sanctions by which its precepts are enforced), a reference to the conduct ; the intellectual, to that discipline of the faculties which shall be the best preparation to qualify every man to perform his functions as a member of society, and also for the special object to which each person, from choice, inclination, or necessity, may devote his life."* National education must recognize no differences, there must be no *titled* processes of teaching ; and if the classics, modern languages, and the polite accomplishments of the affluent, be unsuited to the state and wants of the children of the poor man, mechanic, or tradesman, the primary or elementary education must be unalterably the same for all classes and persons. Education must possess but one character, otherwise it can never become national.

The purport of a national education is not to inculcate opinion or creed, or itself becomes a creed ; but to teach the facts and experience of knowledge and the *practice* of religion. National education cannot be built upon expediency : there must be no *half-measures* to tickle the prejudices of this or that party, or even to soothe the suspicion of the public, or it will never operate, but will have to be patched up time after time, until it at last fall into utter contempt and ruin. The example of Germany, Prussia, and Holland, offer external evidence of the practicability and efficacy of a national education on a most comprehensive scale. The Prussian system, which, were it not actually in operation, might be laughed at as Utopian by the commercialists of England, presents to the world a noble example of national education, and that already exhibits signs

* Second publication of the Central Society of Education, p. 91.

of the future greatness of that kingdom. The distinguishing characteristic of the Prussian national education, and which must by necessity belong to a national system, are, first, the nomination of a minister of public instruction, aided by a president and council, or cabinet, divided into three sections—1st. Church affairs; 2nd. Public instruction; and 3rd. Medical board. The division of the section into three separate boards is peculiar to Prussia, and has the great advantage of giving to each department its proper functionaries. The second division of the section, public instruction, consists of twelve counsellors, through whom the minister regulates and enforces the laws relating to education. The first minister is represented in every province by an "*over president*" or sub-minister, who also possesses a council divided into three sections. The national education in each of the departments is governed by a "*regency*" or council, with a president; next in succession, the circle is overruled by an inspector; and, lastly, each parish by a sub-inspector, with a committee of superintendence; and to which, in towns, is added a higher committee of the magistrates. Thus the first minister superintends the whole process and working of education through each inferior functionary, and enforces the laws of public instruction as rigorously as the minister of the interior the laws of the state. Every officer, from the highest to the lowest, is a paid functionary; indeed, generally speaking (says M. Cousin), the spirit of the Prussian monarchy is decidedly adverse to unpaid functionaries of any kind. It is of the nature of aristocratical governments to have a great number of gratuitous officers, as we see in the example of England; but governments which are at once popular and monarchical, like Russia and France, cannot admit of such a system; and if it were pushed far in either country it would end in nothing short of gradually changing the form of the government. In fact, it would be vain to attempt to entrust these gratuitous employments to all the citizens eligible to them on the score of merit; persons of small fortune would soon tire of them, and it must end in their falling into the hands of persons of large property, who would soon virtually govern. In Prussia, all public servants are paid; and as no post whatever can be obtained without passing through the most rigorous examination, all are able and enlightened men; and as, moreover, they are taken from every class of society, they bring to the exercise of their duties the general spirit of the nation, while in that exercise they contract habits of public business. This must be the system of every popular monarchy.

The two most essential laws of public instruction are, 1st. that every parish shall support, by a small assessment, one school; any deficiency of funds is made up by the state: there can be no exception to this law. 2nd. That education is compulsory; either the child must attend the school of the parish, or receive a permission (which is easily obtained from the inspector) to be educated either at home or at some private school. These laws would have been felt as tyrannical had not the Prussian government provided against it by the formation of their normal schools, wherein youth are expressly educated to fill the office of schoolmaster; so that the public at once perceive that their interest and that of their children is consulted by a law that provides so amply for their education.* The normal school is the *chef d'œuvre* in the national scheme of education. A life is given from the very centre of the school; for as the master is, so is the school. This provision has effectually confirmed and is daily improving the national education in Prussia. Thus the law has established, through the school, the scholar, and the master, an equal obligation and dependence, and without which no scheme of national education can ever work.

A National Education must be impartial.—Although education, in its just and comprehensive character, is so mixed up with religion as to be as much, or even more, a spiritual than a secular business, the unfavourable aspect which it has hitherto borne, from the rivalry of opposing sects and parties, has drawn a broad line of demarcation between the joint purposes of education; and, as if the body and soul of a national constitution were torn from each other, the inculcation of religion is held apart from the profane business of general instruction; so that education is always understood to be a mere secular affair. The fact that, in many Sunday schools, not even reading is taught, is unhappily true; and thus even the tittle and only portion of time in the life of a child, which is given to teaching, is devoted to the mere learning of a few verses or chapters in the Scriptures, which they are never afterwards able to read, or a few hymns and the catechisms of the church.† Can there be any thing more at variance with the doctrines of the Gospel, or any policy more blind to effect the desired result? Childhood, as

* "In Prussia, although the law obliges the parishes to found and maintain schools which the whole population is compelled to attend, the government fosters and supports this grand system, by taking upon itself the duty of training upright and able masters for the supply of the parishes, &c."—see Cousin, p. 145.

† See second publication of the Central Society of Education, p. 345.

was before remarked, is an age when sensible objects and signs are the only things comprehended or remembered ; in a few years the memory of childhood dies away, and with it all that it contained ; even the little nursery songs which were one month repeated with so much vivacity and pleasure, in the next are almost forgotten ; the memory stretches in vain to recover them, line by line vanishes until the dream is entirely dissolved. So is it with the mere remembrance of sunday school teaching ; there is no eye to recal, by a visible sign, the verse, the chapter, the hymn, or the catechism ; so that in after life nothing is retained but the memory of the school and the question of its object. It is a deplorable result of the sectarian spirit in this country, that when a school is opened the first question asked is, " what is the denomination ? " and its success—that is to say, the amount of its funds—entirely depends upon the influence of the patronising party. Suspicion on the one side creates the occasion on the other ; and thus the purpose of every school is supposed to be expressly to alienate the minds of children from every other church and doctrine. The established church views with jealousy the schools of the dissenters, the dissenters look askant at each other, while protestants and catholics are mutually suspicious and repugnant. This is certainly not the fruition of the doctrine of revelation, which is all meekness, all goodness, all charity. Looking both upon the evidence before the public of the state and character of education, and the utter hopelessness of a reunion of opinion and conduct between a people so severely divided against themselves, it becomes not only expedient but imperative upon the government to settle the division by establishing a national education, in which no offence might be given to the most delicate stickler for the liberty of private opinion, nor wound even the tenderest conscience.

The plan of a national education does not present a more difficult proposition than this ; and perhaps in no country would the difficulty be so formidable as in England. This, of course, is sufficiently evident from what has been already said. To reconcile so many dissensions upon an old subject of dispute, does certainly appear a fanciful speculation ; but where so much is at stake, and when no other means can possibly be devised for the accomplishment of the object, government must not shrink from the work. Fortunately, England does not want a precedent even in this seeming impossibility. In the German states, catholics, protestants, and Jews, are all taught in the same schools ; and with a success which, notwithstanding some partial opposition, has sufficiently proved the

practicability of the law. Private individuals cannot, like government, assume a neutral position ; every person attempting to set up a school for gratuitous instruction is immediately identified as a churchman, a catholic, an independent, a baptist, an unitarian, or a quaker, who, it is concluded, will teach his own doctrine. A national school could be separate from all sects or parties, and thereby claim an universal esteem. Rival sects will flock round a government standard when it is understood that no underhand scheme of proselytism is snaring the minds of children to a particular church. But it behoveth the state to be perfectly liberated from the slightest party authority ; for once arouse the suspicions of the public on this particular, and government will not only lose all authority, even in spite of the law, but will hardly ever be trusted again. People are never so dangerous as when rebellion is prompted by a religious persuasion and justified by a religious faith. But "the less we desire our schools to be ecclesiastical, the more ought they to be christian." As no sectarian national education would be tolerated, much less could a national education be merely secular ; religion must be the primary and pervading element, quickening and harmonizing the whole scheme into a living fountain of good works. There is not a more beautiful feature in the Prussian plan of education than its religious character. Education in Prussia is profoundly religious, and could have been dictated only by men of inspired genius ; the Prussian law, while it protects the holy functions of the ecclesiastic, and has them to be nominated as inspectors of public instruction, yet wisely guards against ecclesiastical interference by the greater authority of the lay inspectors and officers. No creed is allowed to be taught, so that every child is left as purely to the safeguard of his particular curé, or pastor, as if they were his only teachers. The delicacy with which the law provides for parties of differing religious opinion, is equalled only by its general forbearance and liberty. What M. Cousin has said of religion, with reference to France, is equally applicable to this country.* By these means, and by the tolerating of private schools, all the freedom would be retained which now exists, with this difference only, that education must form a part of the business of every one's life, and for which the state holds them responsible.

"Religion must be the basis of national education, and by religion is understood the christian religion, which is the religion of the country."—See Cousin's *Report*.

It is a matter of great importance, in national education, to secure the good-will and support of the clergy; and every concession should be made to them that does not involve the actual freedom and impartiality of the system. Ministers should be exhorted, both by those of their own order who have a right view of the utility and working of a national education, and also by the writings of laymen, to put aside the unchrist-like prejudices which they have unhappily so much cherished, from a misunderstanding of the object of education. The Prussian law has an admirable provision on this point, as the circle inspectors are usually clergymen, either protestant or catholic, according to the religious character of the circle. Government justly requires that the clergy should manifest the same confidence in the object of education, by making the theory and practice of popular instruction a part of their studies, that thereby a mutual intimacy and respect may be preserved between themselves and the schoolmasters. "That every clergyman, whether of the protestant or catholic church, study both the theory and practice of popular instruction; that he strive to render his studies, whether at the university, the catholic faculties of theology (and in this country must be added the colleges and schools of the dissenters), or the primary and normal schools, available to this end; and, if he do not himself teach in the public schools whilst he is a candidate for holy orders, that at least he acquaint himself with their organization, and with the subjects there taught."* In their examination, particular attention is paid to the knowledge the candidates possess on the subject of education and teaching, and without which they are inadmissible into holy orders; this reciprocal interest has a most salutary influence on the minister, the master, and the scholar, and conduces to that uninterrupted success which has sustained the national education in Prussia. It cannot be supposed that any worse motive than such as springs from an absolute ignorance of the nature of education, could make any rational being a foe to popular instruction. As the sublime object of revelation is to regenerate a world into an universal church, not to establish the secular authority of a section of the church, the ministers of that revelation are either for or against revelation, accordingly as they aid or oppose its accessories. The question, then, is, if education be an accessory? The answer must be referred to the inquiry, which, therefore, becomes the imperative duty of every christian minister. As the clergy of England, of all

* Cousin's *Report*, p. 97.

denominations, possess an almost uncontrollable influence over the public mind, the popular bias in favour of or against national education will be derived from them. With the clergy rests the whole responsibility, and accordingly as they deal with the evidences of the subject will their opinion be right or wrong.

Education, to be national, must be compulsory !—It is a common opinion, even with many educationists, that compulsory education would not be tolerated in England ; that the spirit of English liberty would be startled by such a novel constraint, however much the public interest might thereby be benefitted. There is not a more fallacious opinion, or one more dangerous to the working of a national education. The spirit of English liberty is a non-entity when applied to government ; and though the people may *talk ill*, if the members composing the government are unanimous in the expediency and justice of such a law, the public would soon fall in with the opinion of the legislative authority. National education must be founded upon a law of obligation, or the system, however wisely conceived and planned, will soon present the same failure as the Lancaster and Bell schools ; while the popular indifference will leave them to fall into the abuses and mal-administration of endowed schools.* The

* These remarks are strikingly verified by a comparison of the state of elementary education in Holland and Belgium. Education in Holland is strictly national, and in its results more successful than even in Germany or Prussia. The system of education in Holland is not only well constituted, but, by a compulsory rigid examination of every teacher, either private or public, the whole plan is thoroughly and vigorously sustained. No man in Holland can hope for an office of such a critical character without possessing a demonstrable fitness for its duties.—“Turning from Holland to Belgium, we find a difference which well deserves the attentive consideration of every friend of his country. Since the revolution of 1830, national education has declined in that country ; the Dutch system was abandoned in the blind spirit of party zeal, and the liberal party struck a fatal blow by sanctioning the principle of absolute liberty in an institution to which that principle is wholly inapplicable. Teachers were no longer required to prove their competence ; the communal councils, whose narrow views were substituted for the enlightened direction of the government, employed the teachers whose services could be obtained at the cheapest rate ; good masters, disgusted and humiliated, quitted the profession ; and though the number of schools has been increased, the amount of useful education has been lamentably diminished.....The example of Belgium is fraught with many other useful lessons, but with none, perhaps, more important than the fact that, if the government abandons its proper functions of superintending the education of the country, the charge will devolve on others. It is sheer nonsense to assert that this is a question between education and no education. Every human being is more or less educated, that is, derives habits of thought

number of scholars now attending the Lancaster and Bell schools is entirely regulated by the amount of trade, in fact, whether the children can work or not: this is commonly the case, especially in manufacturing towns, and forms the usual complaint of the teachers in those schools. A voluntary national education would prove no education at all to the great mass of the working population; the necessities of the parents would, as now, always influence the success of

and action from the instruction and example of others. The poacher, the thief, the pickpocket, are highly educated personages, qualified by the instruction they have received in the schools of vice to take degrees in the college of Newgate. The only question is whether we shall leave them to their present instructors, or authorize government to employ a better class of teachers. In a matter of such importance a responsible authority is absolutely necessary; many persons seem to think that the arts of cab-driving, farming, and teaching, come by nature; broken necks and broken fortunes have resulted from the first two errors, but the evil wrought by the third baffles calculation. We deem it necessary to impress upon the public mind that it is not enough to build school-houses and provide salaries; to ascertain the competency of the teachers is infinitely more important, and this is the exact point in which all British systems, including even the Irish Board of National Education, are essentially defective. Let us see the result of the abandonment of this superintendence by the government of Belgium. 'The revolution of 1830 proclaimed freedom of teaching as a first principle; just as if, on this point, it had been previously subjected to a prejudicial despotism. But let us see the use made of the large field thus opened to the beneficence of the public and of the (religious) congregations, which made such efforts to obtain this freedom. Results speak more forcibly than reasoning. The new government, as M. Ducpetieux says, having abdicated its right to the influence exercised by the fallen authority, everything which that authority had created felt the effects of such desertion. They began by depriving the provincial commissions of the coercive power with which they had been armed; they ceased to regard the condition of certificates of competency as obligatory; they changed the inspectors, and finally abolished them altogether, reserving to the public authorities a vague right of examining the condition of the schools whenever they thought fit. The disdain with which the best masters of the preceding epoch were treated, compelled them to leave the field open to intruders without capacity or information; young teachers trained in the normal schools abandoned a career which was no longer attractive; the only normal school in Belgium was closed; the associations of masters and societies for the encouragement of primary instruction were dissolved; that of Liege alone remains.'—This long extract is taken from the *Foreign Monthly Review* for May, 1839, "Voyage en Hollande et en Belgique, sous le Rapport de l'Instruction Primaire, des Etablissements de Bienfaisance, et des Prisons dans les deux Pays," by M. Ramon de la Sagra. The writer of this paper particularly directs the attention of the reader to this most admirable review, as containing most valuable and interesting information on the subject of national education.

the schools. Moreover, parents who are poor (and how many millions are poor in England!) would begrudge the time required in preparing their children for school; and, either from idleness or want, they would rather shrink from the exposure of their destitution and habits of profligacy, than suffer the reproof and dictation, or endure the constraints, of private inspectors. The poverty and ignorance of the indigent part of the population would ever be an insuperable obstacle to a voluntary national education. Those who are employed in manufactories, and even respectable mechanics and artisans who have large families, are often obliged to direct the whole collective force of the family to its maintainance, and nothing short of a higher obligation could induce them to send their children regularly to school. This argument of their poverty against school obligation is easily answered. The glut in the labour market is a general outcry with the people, and it is sufficiently evident, by the reduction of wages, that the supply is greater than the demand, and thereby adding to the evils an outrageous competition, both among the workmen and the masters; for as the price of labour sinks, so does the price of the production. One great cause of this ruinous declension in the value of labour is, the employment of millions of young children of all ages, who, taking the place of adults, sink the amount of wages to the minimum, and by expelling their parents from their occupations, throw the labour of supporting the whole family upon themselves. This monstrous evil is growing every day, and every day augments the amount of suffering, poverty, and crime. The physical impairment of the children, and the utterly ruinous state of their moral and intellectual character, has been made a matter of parliamentary enquiry; nor could the evidence be read without pity and indignation. To establish the law of school obligation would be, perhaps, the most effectual way to remedy this dreadful evil; the public would soon appreciate the change, which, in benefiting the child, must improve the condition of the parent. Were every child compelled to attend the national schools, or to receive at home a certain modicum of instruction from private masters (for the law must extend to all classes to be obeyed by any), those unhappy, helpless little beings, who are now the unresisting victims of the cruelest necessity, would be deriving an education becoming rational souls, acquiring that health of body and independence of mind which would adapt them the better for their duties in life; for, however humble the occupation, it may be elevated by personal excellence. Under such a change, the parents would necessarily be called in to supply

the deficiency of labour, and thereby recover their natural feelings to their children, and their own self-respect. The value of labour must rise to a juster proportion, without those frequent oscillations to which it is now liable; and perhaps may acquire a steadiness that could scarcely be looked for. National education is not a thing to be manufactured after the manner of a work of art, piece by piece; it can act only through the simultaneous concord of its essential principles. Prussia has held this perfect fabrication up before the whole world; national education that is whole, impartial, and compulsory. How it has operated is a subject which it is the bounden duty of every one, claiming an interest in the welfare of mankind, to examine and reflect upon. Nations, even the most civilized, too much resemble the Chinese in their national vanity; nor is the self-complacency of the English on this point less egregious. But what is the truth when a rigid comparison is drawn?*

Would we seek to elevate the profession of the educator in the public esteem, that esteem must first be directed by the honour which it receives from government; but, to raise the office still higher, the duties, and the effects of those duties, must renovate the national character so as to enable it to value and confide in their efficacy.

* "England, in which country alone there are annually executed more human beings than in several other countries taken together, suffers more than two millions of her people to walk about in utter ignorance, and abandons education to speculation and chance, as a matter of merely private concernment—we mean the elementary instruction of the lower orders; for learning there possesses as extensive, wealthy, noble (and mal-administered) establishments, as are any where to be found upon the globe. According to the documents before us, out of a population of nine millions and a half, there are above two millions without schools. In London, according to an accurate estimate, one-fourth of the inhabitants are thus destitute. No wonder assuredly that crime is rife! What a blessed contrast is presented to us by our German fatherland!"—*Literaturzeitung für Deutschlands Volksschullehrer*, page 40.

(To be continued).

SENTIMENT AND SENSIBILITY.

A SKETCH.

SCENE I.—DRAWING ROOM.

Maria reading ; Ellen leaning over her, weaving a rose in her hair.

Ellen.—I TELL you, then, he will not have her.

Maria.—Well.

Ellen.—Nay, tell me what you think.

Maria.—I hope he may not.

Ellen.—“Hope he may not?” Say, rather, that he will not, cannot, dare not !

Maria.—Caprice dares anything, my love. Do not our village gossips tell the tale ?

Ellen.—’Tis false ! Slander hath a hundred echoes to its voice, and this is one, baseless as those vain presentiments that wait on hope. Some accident—a friend or relative is ill—one of a thousand unknown chances may detain him. Nay, look not so incredulous, *Maria*. When last he left me, how like a sad prophetess you shook your head, and said “he comes not,” “he cometh not.” But did he not return, more loving far than ever, when even I had almost ceased to hope ?

Maria.—Would that you had !

Ellen.—What, ceased to hope ?

Maria.—To love, dear girl.

Ellen.—Thou harbinger of woe, ill-boding friend ! Oh, I could scold ! But indeed, *Maria*, ’tis unkind to tell me so. My memory, like a golden missal radiant with holy truths, is full of the recollections of his love ; that night, that last loving night, when heart, eye, tongue, in woven utterance of deep passion, fixed them there for ever. Were it possible to raze out those characters of fire my heart would be an everlasting void, a buried urn, with its dry dust of unrecorded love.

Maria.—’Twere better never know a joy than feel the bitterness of its departure, which is for ever. Love is like the fabled Proteus—a thing of changes.

Ellen.—Nay, *Maria*, I will not say what love is : love has no argument but love. Now, say thou triest to vex me. Thou art a child of sadness.

Maria.—Am I the bride of love ?

Ellen.—Forgive me, dearest. Even our fears are selfish auguries ; and I *do* fear. I question my own heart, that, like a dubious oracle, confounds my hopes with fears. He will come ! now say he will—do say he *will*, Maria.

Maria.—Dear Ellen, I hope he may.

Ellen.—Nay, say he will ; 'tis a sweet cheat.

Maria.—He will.

Ellen.—And yet he may *not* come, Maria.

Maria.—He may not.

Ellen.—Sad comforter, thy words are but the echo of my hopes and fears ; the deeper meaning of thy eye is hopeless. I'll go and play that little melancholy air ; the words are his. Come too, Maria, we will sing and weep together. Come, love ; your heart is *always* sad.

Maria.—And yours—

Ellen.—May be, you would say. 'Tis false ! Come.

SCENE II.—EVENING.—A GARDEN.

Ellen seated near a grotesque overshadowed fountain.

Ellen.—'Twas here we parted ; scarcely one little month since last we sat together on this old fountain's brink, and yet to me this little month has widened into years ; for I have counted it by minutes—moments ; like to a drooping traveller, the irksome hours have toiled through their wearied flight. I had no present, the future was my present ; and 'tis come. He should be here to-night. Hark ! 'Tis nothing. I grow all ear ; the very whispers of the air, fanning from leaf to leaf, sound with the startling clearness of a sudden voice. In the distant twilight shadows of the woods I see his form starting, as once he used, with eager bound, to clasp me to his breast. Vain perplexity of sense ! My eyes ache with gazing, when every waving bough mocks me with his form. Even here we sat together ; and as I idly dropped bit after bit of the dried and broken branches scattered by into the little laughing circles of the water, we watched them hurried round and round, and thence he drew a hundred strange and antique similies. The birds sang their vesper hymn ; I heard his voice alone. I was all heart : and he has forgotten me.

Hark ! a footstep—'tis gone ! Be still, my heart. Hark ! it is ! I tremble. My Mordant ! It is——Maria !

Maria.—My love ! Ellen, Ellen ! Nay, weep not. My beloved, you frighten me ; my heart will break. He may come—speak to me, Ellen—he may come yet. Those convulsive sobs are dreadful. My love, speak to me. I am most miserable !

Ellen.—Bear with me a little, a very little. 'Tis all true ; I feel it now. My heart suffocates me, Maria. Bear with me awhile.

Maria.—Weep on, my love. My poor Ellen, there, on my bosom, pour forth thy tears : tears are the heart's balm. My love !

Ellen.—My kind friend ! I am very weak ; I did not think I was so weak. Forgive me these tears, they are the last testimony of my passion. All is over. I am better now. Come.

Maria.—Lean on me. You tremble, dear Ellen.

Ellen.—No, no ! I am quite strong, quite well. Come.

SCENE III.—GARDEN AS IN THE LAST SCENE.—TIME, EVENING.

Ellen.—I fear I shall weary you, Maria. I feel weaker to-night than usual.

Maria.—You falter, love. Lean heavily on me ; there, let me clasp thy waist. We will return ; the air is chill.

Ellen.—No : I am better. We will rest awhile.

Maria.—Not that way, my love ; not that way.

Ellen.—Yes ; no other. Nay, do not fear me ; I am now sorrow-seasoned. Yes, to the fountain ! I feel stronger ; a strange quietude comes over me, as if my spirit were bent to some bold enterprise. Maria, I do remember once—it seems an age ago—when I was young—yes, young ; for hearts (not years) are time's true chroniclers : when I was young, then, some twelve month's since—I do remember the story of a youth who had outlived his wants and could not wait for death ; death was his last of human wants. He died. How inexplicable, *then*, to me, how dreadful, death ; when life was Eden, and love's atmosphere bathed everything in its own radiance ; till every ray, concentrate in *one*, burnt up the heart ! Death, Maria, death now (for I am very old) is my sad life's refuge.

Maria.—Ellen, my love, this is not kind ; your grief is selfish.

Ellen.—Selfish ? Can *grief* be selfish ?

Maria.—To wish for death : when I have watched, through two

long months, the tedious windings of your illness, through days and nights unbroken interchange, and while you slumbered have tended you as doth the poor bankrupt the last venture of his fortunes, you would die!

Ellen.—Forgive me; kiss me. I *am* a selfish girl: 'tis a lesson I have learned of late. Two months lost of my brief life! Here, Maria, rest we awhile, on this same moss-grown water edge. The dull grey stone is changeless, and the grotesque image gazes with untired eyes down on the restless waters. Three months, three months, Maria; and in three months more the change will be complete. Nay, weep not: would that *I* could weep! My heart is a dried fountain; there is no moisture, no, not even the dew of common tenderness.

Maria.—Shall we compare our griefs? My woes wear the livery of yours, sole tenants of my desolate heart, how long concealed, brooding in silence, when you were all hope and joy! The contrast was a cruelty to me; yet talked I not of death, but with a patient spirit trained my heart to the hard task of seeming glad.

Ellen.—Forgive me, my love. I am young in grief; I'll learn to suffer patiently. Here be our friendship's fane; by the bubbling waters we will meet and school each other into sober sadness, and with dry eyes talk of the past—the past. The sibyl could not die till she had clasped her dear Cumean earth. This spot is my Cumea; here first I felt the bliss of living, existence was till then a sparkling unconnected dream; Cumea gave me my heart's birth, and here—like a loving child, with its soft face of light and laughter, and visionary fancies of the future, suddenly blasted in its extacy—lies dead! This be my Cumea.

Maria.—It cannot be!

Ellen.—My love!

Maria.—And yet the long grass is bowed down far back into the wood.—(*Suddenly turning round*) Oh, God! my Ellen, know you this? (*showing her a hair-ring, which she has just discovered on the margin of the fountain*). 'Tis his!

Ellen.—What else?

Maria.—(*Looking round*). He must be here!

Ellen.—Who?

Maria.—The ring, Ellen! Know you this ring?

Ellen.—'Tis mine! yes, 'tis mine! 'twas mine! Nay, give it me. Poor trifle! I have a vague remembrance that *thou* wert once a costly treasure. I do remember me, Maria. He almost snatched

it from my hand, and covered it with kisses. You smile : indeed, 'tis true. A strange worship and a silly idol, was it not, Maria? yet 'tis true. Ah, me! I think this little fold of platted hair should make me weep, for it is full of *memories*. I cannot weep; tears are the heart's counsellors, they say, poor pleaders often. I have no heart, no feeling; 'tis strange, Maria, but I cannot feel.

Maria.—The poor exile, who had wept long years away, complained he could not weep; *he* said 'twas strange.

Ellen.—Died he, Maria?

[*Mordant, who had concealed himself, comes suddenly before them.*]

Mordant.—Ellen!

Ellen.—I should know you, Sir.

Maria.—(*Whispers*). Courage, my sweet girl.

Ellen.—Mordant, I have been very ill since last we parted: come, sit down by me, for we are old friends, you know. Oh, you are married; I do remember, you left me to be married. Your bride is beautiful? Does she often smile upon you, Mordant? You weep; you are very kind, a gay bridegroom, to feel thus for a poor sickly girl.

Mordant.—My Ellen, forgive me! 'Tis false! I am not married—love none, have loved none, but thee!

Ellen.—Your arm, Maria. Mordant, I will be a debtor to you, too; your arm, come. Not married! not married! And what is that to me? yet, like a riddle, it enshrouds a meaning. Not married!

Mordant.—My beloved Ellen, I am thy own Mordant. Be not so lost: thou shalt be my blooming bride. I ever loved thee. A vain caprice hath crept between us. 'Tis past: I will never leave thee more!

Ellen.—(*Stands still, looking down*). Thy blooming bride?

Maria.—What do you gaze upon, my love?

Ellen.—Maria, pluck me that little pale and shrunken flower: thank you. How many sunny mornings, think you, have opened upon this flower, drinking the diamond-beaded dew from off its leaves? and it has withered! Know you, Mordant, why?

Mordant.—My love!

Ellen.—It held no sympathy with life; the sun warmed and the dew bathed it, but it could not feel.

Mordant.—My Ellen, what dost thou mean? Thou wilt live, and be again my joyous fondest girl, my wife, my fond wife!

Ellen.—Thy wife! I should be happy then. I will be. My bridal dresses are prepared. Maria! nay, look not jealously upon me; we will not part, Maria. Oh, what a life of sunny dreams will float around me! I do behold it all. On a bright summer's morning, the village bells wake jocund every sparkling eye, the laughing maidens and the flaunting ribbons, the innocent jest, the wine cup and the feast, and heart-throbbing healths of happiness to the fair bride; the solemn service, the silence and the ring, the dead around us! I faint! the ring—*Mordant*—I sink—I die!

SCENE IV.—AN OLD-FASHIONED PARLOUR.

An old Lady and young Maiden.

Maiden.—And she died, aunt?

Aunt.—She died.

Maiden.—Poor Ellen! and she was beautiful! And *Mordant*—did he, too, die?

Aunt.—Listen, my child. And oh, may my words be a charm around thy heart, to save thee! *Mordant* lived and married.

Maiden.—Married, aunt?

Aunt.—Listen. A little before poor Ellen died, three days after her fainting in the garden, she woke as from an opiate dream. Her feelings, fondness, sympathies returned. She was most lovely: no stain of death obscured her bright complexion, no care disturbed her peace: passion was dead. *Mordant* and I sat by her couch. *Mordant* was a poet, and as the gold-suffused sky reflected its amber light over her beautiful and faded form, he felt—yes, he thought 'twas love. 'Twas sensibility, or sentiment, or poetry; *but 'twas not love*. He wept; and so he would had all been but a vision of his mind. She died. He heard the village bells, and wept; and what was *luxury* he fancied woe. I hated him not; I despised him. *Mordant* was what the world approves, a man of refinement, sensibility, and caprice. Ellen's death was poetry to him. He robbed her of her love, *and love, with woman, is a PRINCIPLE*; left her through caprice, returned through selfishness, and wept by impulse: grieved—he *never* grieved.

Maiden.—Are all men Mordants?

Aunt.—*All*: the exceptions characterize the rule. Strength brutalizes them, school hardens them, society vitiates them, and poverty and wealth demonize them.

Maiden.—And woman—

Aunt.—Is the victim!

RECENT CONTRIBUTIONS TO ENGLISH HISTORY.

NUMBER I.

"THE History of England is still to be written," is an observation as true as it is frequently made; and one, moreover, which must necessarily be repeated for many years to come. In the first place, because the earlier materials for such a work have as yet scarcely been subjected to that rigid critical examination into their authenticity and historical value, which is necessary to a just appreciation of their authority, though the recent labours of Lingard, Palgrave, and Lappenberg,* in this particular branch of the subject, have done much to facilitate the enquiries of subsequent writers; and, in the second place, because there exists many sources of our more recent history, which, having hitherto been neglected, require to be thoroughly investigated—a work which the present generation can scarcely hope to see brought to completion, notwithstanding the spirit of research and enquiry which is actively bestirring itself on every side, and has manifested its existence in an extraordinary manner, by the numbers which it has enrolled under the banners of the CAMDEN SOCIETY,†

* See more particularly the literary introduction which Dr. Lappenberg has prefixed to the first volume of his admirable History of England (*Geschichte von England*, Band I., s. 1—lxxviii.), a work to which we purpose to direct the attention of our readers on some future occasion; in the meanwhile they will, we are sure, join us in our hope that the English translation of it, which has been already prepared by a very distinguished scholar, may be laid before the public.

† We are here only echoing the sentiments expressed by Mr. Hallam at the late dinner of the Literary Fund, when, in returning thanks after the toast, "Mr. Hallam and the historical writers of England," that gentleman instanced, as a striking proof of the progress which historical studies were

a society instituted to meet the growing appetite for historical information, and which bids fair to spread throughout the country a fondness for the study of early English history and literature, which cannot fail to produce, in the fulness of time, a most healthy and beneficial effect upon the national literature of the day.

"There are three kinds of history," says Horace Walpole, "all good: the original writers; full and ample memoirs compiled from them and from manuscripts, with great exactness; and histories elegantly written and arranged. The second step is indispensably necessary for the third; and I am more pleased with it than with the third. It has more of truth, which is the essence of history." But if we admit with Walpole that the "full and ample memoirs," to which he refers, have, to use his expressive phrase, "more of truth, which is the essence of history," we must insist that that essence is found in greater abundance and purity in the "original writers," from which such memoirs are compiled, and most abundantly of all in the original letters, of those stirring and active spirits who make history, if they do not write it. The value of this class of documents has nowhere been set forth more effectively than in the introductory remarks prefixed by Sir Henry Ellis to the first series of his interesting collection of *Original Letters, illustrative of English History*, and which we shall here quote, as a fitting preface to our account of the two works, which it is the object of the present article to bring under the notice of our readers.

"They who desire correct information of the history of their country must not limit their reading to the work of the general historian exclusively.

"History, confined to the greater events which it records, is usually certain and true; but in the colouring which writers give it, and which they are proud to call the philosophy of history, it is too frequently erroneous. Characters are drawn by those who could not know the persons they describe: facts are imperceptibly perverted to the uses of party; and events which owe their origin to the simplest, are often traced back to the remotest causes. Thus circumstanced, history, however comprehensive in its view, partakes too much of the embellished nature of romance.

making throughout the country, the fact that the "CAMDEN SOCIETY, instituted for the purpose of perpetuating and rendering accessible whatever is valuable, but at present little known, amongst the materials for the civil, ecclesiastical, or literary history of the United Kingdom," had been joined, in the space of twelve months, by one thousand members—the number to which it was originally limited. It is right to add that the limit has since been extended to twelve hundred, and which, we believe, will very shortly be attained.

"To remove doubts, to verify facts, and to form a clear conception of particular events, the reader must seek subsidiary aid in the dispersed materials of history : of which ORIGINAL LETTERS OF EMINENT PERSONS IN THE STATE form both the largest and the most important portion ; and they exist in this country, in an uninterrupted succession, for more than five centuries.

"These bear the impress of their respective times : and, whilst many of them regard affairs in which the writers were actively engaged, all afford a closer and more familiar view of characters, manners, and events, than the pen of the most accomplished compiler of regular history, even if he might be trusted, could supply. They unravel causes of action, which, without their aid, would be impenetrable, and even throw new light upon parts of history which superficial readers suppose to be exhausted."

Forcibly as these observations apply to all original letters, they do so with still greater effect to the correspondence in which the diplomatist lays before his sovereign an account, not only of his own exertions, and of the intrigues in which he has engaged for the purpose of carrying out the object of his mission, but also the obstacles which he has encountered, the motives of those who have contributed to his success or failure, the state of parties in the court at which he is resident, and his views of the characters of those by whom he is daily surrounded.

For though Wotton's bantering definition of an ambassador*—*Legatus est vir bonus peregrè missus ad mentiendum Reipublicæ causâ*—may, in some measure, be true, it must be remembered that he is only required to lie *for* his master, and not *to* him. On the contrary, that whatsoever he may do *for* him, *to* him he is expected to disclose the truth, the whole truth, and nothing but the truth.

It is, therefore, with the greatest satisfaction, that we contemplate the successful carrying out of a project which has originated with Mr. Charles Purton Cooper, the able and indefatigable secretary of the late Record Commission, and which has for its object the publication, in one uniform collection, of all the *inedited* diplomatic documents connected with the French embassy in England during the sixteenth century ; a period inferior in interest to none which have either preceded or followed it, and during which diplomacy played the most important part. Nor can we have any fears that our expectations of seeing this great scheme brought to a happy termination, will be doomed to disappointment ; since the researches which have been made, with the view of ascertaining how far it would be practicable, have been so successful that the first two volumes of the work

* See Thoms' *Book of the Court*, p. 394.

have already been published. On the continent, these volumes have been received with universal approbation; and all that is now required to insure the continuance of the undertaking is, the sale of some two or three hundred copies in England. And when it is considered how important must be the illustration which this collection is calculated to afford to English history, and how indispensable it must be to every historical library, it can scarcely be doubted that such a sale will be realized, and the completion of so invaluable a contribution to our history thereby secured.*

But it is time that we should render some account of the two volumes already published—the first-fruits of this rare enterprise. They are devoted to the *Diplomatic Correspondence of Bertrand de Salignac de la Mothe Fénelon*,† who was the ambassador from Charles IX. of France, and Henry III., his successor, to the court of Elizabeth, from the year 1568 to 1575; and the volumes before us extend over the years 1568 and 1569, which were marked in France by the civil wars which disturbed that country, and in England by the detention of Mary, by the accusation against the Duke of Norfolk, and by the rebellion in the north; thus affording abundant matter to interest and excite the attention of the reader.

Bertrand Salignac de la Mothe Fénelon, a member of the same noble family of Perigord from which the celebrated author of *Telemachus* was descended (the immediate ancestor of the Archbishop of Cambray having been the eldest brother of the ambassador) arrived in London on the 10th of November, 1568, as the successor of Bochetel de la Forêt, by whom he was presented to Elizabeth at an audience which she granted him at Hampton Court on the 14th of the same month; and he continued to reside in England, as the minister of France, until the month of September, 1575, when he was succeeded by Castelnau de la Mauvisiere. His dispatches during that period amount to four hundred and sixty-nine, and are preserved in five small folio volumes, entirely in the handwriting of La Vergne, who was one of his secretaries; which five volumes, it may be observed, were communicated by Fenelon's descendant, Le Baron de Fénelon, the ambassador at the Hague, in the middle of last century, to Carte, who was then engaged upon the third volume of his history of England, in the preface to which he has thus expressed himself

* It should be mentioned, to the honour of the Bannatyne Club, of Edinburgh, that they have subscribed for one hundred copies.

† *Correspondance Diplomatique Inédite de Bertrand de Salignac de la Mothe Fénelon*, &c., 2 tom. 8vo., 1838.

upon the subject of them :—" A great part of the transactions in the succeeding reign relative to Mary, Queen of Scotland, during her captivity, are taken from the dispatches of M. de la Mothe Fénélon, a minister of great virtue, abilities, and integrity, who was ambassador at this court from A.D. 1568 to A.D. 1576. His dispatches in five volumes folio were communicated to me by the late M. de Fénélon, who was for several years ambassador at the Hague, and are now in the hands of his heir." But though Carte made great use of these dispatches, the rapidity with which he was necessarily obliged to consult them, the not very legible character in which they were written, and their antiquated language, all combined to prevent his turning them to that good account to which future writers will unquestionably apply them : added to which, it must be remembered that he never enjoyed the opportunity of consulting those letters of the court, &c., which, as indispensable to a perfect understanding of the dispatches, are here joined with them.

It is from these supplementary documents that we shall endeavour to show the importance of the present work, the dispatches themselves forming, as it were, one entire and perfect chrysolite, of whose beauty no conception could be formed by an examination of the sparkling particles which have fallen from it while under the hands of the lapidary ; a goodly building, whose beauty and utility it were impossible to prove by exhibiting some few of the bricks of which it is composed. They are, indeed, invaluable ; but their interest and importance would not be seen by such a selection of passages as our limits would admit of. Their beauty consists in their completeness, and in their perfect developement of the great events of the period ; more especially in the thorough insight which they afford us into the unceasing and untiring efforts of the catholic party to restore the ancient faith in England, and with it Mary to the throne of Scotland, and perhaps of England ; into their conspiracies to remove the able and patriotic Cecil from the favour and councils of his mistress ; and into the whole scheme of the great rebellion in the north, of which, as it has been well observed, a perfect history might be written from the materials in the present volumes alone. The illustration which these dispatches also afford to the melancholy but interesting history of the Queen of Scots, is valuable in the extreme, abounding as they do with materials calculated, on the one hand, to awaken feelings of pity for her condition, and, on the other, to display, in the clearest manner, the duplicity of herself and her party, and the stern necessity which eventually compelled her opponents to deal with her as the

enemy of the queen, the government, and the country. As, therefore, for the reasons we have just stated, we prefer selecting our specimens of the work from among the supplementary or explanatory documents contained in it, we think we cannot do better than produce some which are calculated to throw light upon a point connected with the history of Mary, which has hitherto been involved in considerable obscurity. We allude to the charge brought against her of having made a cession of her right to the crown of England in favour of the Duke of Anjou.

Camden tells us, in his *History of Elizabeth* (ed. 1615, p. 118), that "Murray, a little before his departure, had cunningly (as I shall show anon) propounded to the Duke of Norfolk a marriage with the Queen of Scots, and also to the queen herself had secretly given hopes, by Melvin, of being restored to her dominions; and withal, to alienate Queen Elizabeth from the Queen of Scots, he had spread abroad rumours that she had conveyed her title to England to the Duke of Anjou, and that the same conveyance was confirmed at Rome." Speaking afterwards (p. 129) of the articles of marriage between Mary and the Duke of Norfolk, one of which was "That she should revoke her assignment of the kingdom of England to the Duke of Anjou," he adds, "She protested there was no assignment made to the Duke of Anjou; nevertheless, if they should require it, she would procure his renunciation." In the first volume of Fenelon (p. 422) we have this denial repeated, in the most unqualified manner, by Mary, in a letter to Elizabeth, dated the 25th of May, 1569, and of which the following is a literal translation:—

"MADAME,—Having understood from the Bishop of Ross, my adviser, that some objections had been made, to hinder the prompt demonstration of your good will towards me, on the ground that I had entered into some contract with Monsieur d'Anjou, the brother of the king, Monsieur my brother, which might prejudice you, I feel myself compelled, although I have not recovered my health, to assure you, by these badly-written letters, on my conscience, honour, and credit, that I have never made such contract with him, nor any other, of any kind, nor have ever had it in contemplation to do ought to your prejudice since I arrived at years of discretion, nor anything so little advantageous to this kingdom or myself as to make any contract or transmission; of which I will give whatsoever proof, assurance, or surety, which you may think proper to suggest, as the Bishop of Ross will tell you more at length, entreating you to believe him and excuse me; for I am too weak to write you as I am accustomed and disposed, only I feel compelled to give you this testimony under my own hand, to which I call God to witness and I pray God to have you in his holy keeping."

This charge of alienating her rights to the crown of England to a foreign prince was, as is well observed by the editor of these dispatches, one of the gravest charges, in a political point of view, which could be brought against Mary, more especially when we consider that she was the nearest heir to Elizabeth, and had even claimed the crown of England, to the exclusion of her cousin. She had, moreover, avowed her pretensions by assuming the arms of England, after the death of Mary; and it became, therefore, a matter of serious importance that she should not transfer the claims she had put forth to any prince of sufficient power to seek to establish them by force of arms. All the historians who have alluded to this cession have, with the exception of De Thou, who repeats a report that it had been made in favour of Philip II., spoken of it as executed in favor of the Duke of Anjou; and we learn from the diplomatic correspondence now before us (vol. ii., p. 423) that the court of Spain, in promising assistance to Mary Stuart, demanded such an assignment of the claims in favour of Don John. But light at length has broken upon this hitherto obscure point. The editor has illustrated it by five documents drawn from the French archives, and now (with one exception) published for the first time. They consist of

1. An act executed by Mary on the 4th of April, 1558, twenty days before her marriage with the dauphin, by and in which she made over to his father Henry II.—in the event of her dying without issue—the kingdom of Scotland and all *her rights to the throne of England!* or, to use the words of the document itself, “*le royaume d’Escosse selon qui consiste et comporte, oultre tous et telz droicts qui lui peuvent ou pourront, ores et pour l’advenir, compecter et appartenir ou Royaulme d’Angleterre,*” &c.

2. Another act of the same date, likewise in favour of Henry II., but certainly only a cession of Scotland, and an assignment of all the revenues of that kingdom until the entire reimbursement of all sums due to France, and which had been estimated at one million sterling.

3. A third act, subscribed on the same day by Mary Stuart, containing a formal renunciation of every declaration which she might be compelled to make by the Scottish States, prejudicial to the grants executed by her in favour of France.

4. The declaration by Charles IX., at the request of Elizabeth, on the 10th of July, 1569, in verification that Mary had never made any cession to the Duke of Anjou of her rights to the throne of England; and this he declares and affirms *par foy et parolla de Roy.*

5. A similar declaration made by the Duke of Anjou, *en foy et parole de Prince*.

Similar declarations appear to have been made by Catherine de Médicis, the Cardinal of Lorraine, and the Bishop of Glasgow, though the originals are not to be found in the archives of France. The political motives which led to these denials may be found in the position in which the Queen of Scots was placed at the time when they were made—a prisoner in the hands of her to whose prejudice such cession had been given; for the cession, as is now clearly seen, really existed, though it was in favour, not of the Duke of Anjou, but of his father.

Before taking our leave of this important publication, which we must now do, we have a few observations to make on the use to which it has been already applied. Dr. Lingard has availed himself of it in the eighth volume of the new edition of his *History of England*, now in course of publication, and that, too, we are sorry to say, in a manner to justify the charges of partiality which have been so frequently brought against that otherwise admirable work. Facts prejudicial to Elizabeth are given with full effect. Thus, when Fenelon mentions Norfolk having charged Leicester with taking unbecoming familiarities with Elizabeth, we find the particulars fully stated in a note to page 37; while, on the other hand, the subject of Mary's cession to the Duke of Anjou is thus treated in the following note, which will be found at page 63:—

"That any such transfer has ever been made was denied, not only by Mary, but by the King of France and by Anjou, on their honour and conscience.—See the Documents in Fenelon, i., 431-5."

What reader, now, would ever suspect that the "documents in Fenelon," to which Dr. Lingard so speciously refers, contained any thing more than the denials alluded to in the note? Who would ever suspect that those "documents in Fenelon" contained proof that a cession had been made, though it was to the Duke of Anjou's father, and not to the duke himself, more especially when this cession is spoken of in the text as a "*fable*?"

We now propose to direct the attention of our readers to a work which, although perhaps of equal historical importance, is of an essentially different character from the dispatches of La Mothe Fénelon: we allude to *England under the Reigns of Edward VI. and Mary, with the Contemporary History of Europe*; illustrated in a

Series of Original Letters, never before printed. With historical Introductions and Biographical and Critical Notes, by Patrick Fraser Tytler, Esq.*

The letters contained in these two volumes have, with very few exceptions, been selected from the invaluable collections of manuscript original letters preserved in the State Paper Office; and have there come under Mr. Tytler's observation in the course of his researches after materials for his history of Scotland, and seeming to him calculated to throw much new and valuable light upon English and continental history, he determined upon presenting them to the public, and upon endeavouring to do so in a more popular form than has yet been attempted. Instead, therefore, of presupposing his readers to possess a full acquaintance with the history of the period and characters which these letters illustrate, he has prefaced them by short historical and biographical introductions, and has endeavoured to render them intelligible to general as well as antiquarian readers, by abandoning the ancient mode of spelling.

By thus carrying out to a much greater extent the principle of historical illustration first introduced, we believe, by Sir Henry Ellis, in his valuable Collections of Letters, to which we have already referred, and by rejecting altogether the ancient and repulsive orthography of the original documents, Mr. Tytler has produced a work which must be considered as a great advance beyond all those which have preceded it. We wish that he had gone beyond this, and instead of jumping continually from one subject to another, now giving us a glimpse at English, and now at foreign history, he had so classified his materials that all the documents relating to one particular point might have followed each other in chronological order, without any other interruption (if interruption it may be called) than the agreeable thread of narrative by which Mr. Tytler now illustrates and connects them. But, though not perfect (and what book ever was perfect in the eyes of a reviewer?) the work before us is a most agreeable and instructive one; so full of information and so rich in new materials for our history, that it must inevitably take its place in every historical library; and so amusing withal, from its intermixture of public and private documents, as to be especially calculated to please the taste of the general reader, who would fain catch a glimpse of the great men of those bygone times. The historical critic will find in it, perhaps, too great a craving for novelty, too intense an

* London: Bentley, 1839, 2 vols. 8vo.

anxiety to develop new views of well-known persons and oft-told events ; a disposition which, while it has led the editor, on the one hand, to exalt the character of the protector Somerset, or at least to veil the more glaring faults of that haughty subject, would seem, on the other, to have prompted him to draw into light the defects of that great man and patriotic minister, William Cecil, Lord Burleigh, to whose sagacity and perseverance we are mainly indebted, under Providence, for the establishment of the reformed religion in England.

But our observations have extended to a greater length than we had intended. We have pronounced the book a good and interesting one, and we will now adduce a few extracts from it in proof of what we have asserted.

Among the many interesting materials collected by Mr. Tyler, there are few more valuable than those illustrative of the events connected with the execution of the lord admiral, the Lord Seymour of Sudeley ; whose death has always been looked upon as fixing an indelible stain upon the reputation of his brother, the protector Somerset having, it is supposed, availed himself of the restless ambition of the lord admiral in such a way as to get rid of a dangerous rival. The following curious and characteristic document, relating some conversations between Lord Russell, the lord privy seal, and the lord admiral, cannot but be read with considerable interest.

" CERTAIN COMMUNICATIONS BETWIXT THE LORD PRIVY SEAL AND THE
LORD ADMIRAL.

"Riding one day together with my lord admiral, as we followed my lord protector to the parliament house, I said unto him, my lord admiral, there are certain rumours bruited of you which I am very sorry to hear.

"My lord admiral demanded what the same should be.

"I showed him I was informed he made means to marry either with my Lady Mary or else my Lady Elizabeth. And touching that I said, my lord, if ye go about any such thing, ye seek the means to undo yourself and all those that shall come of you.

"He asked me who informed me thereof: desiring earnestly to know the authors of the tale to me.

"I showed him I heard it of divers of your near friends, and such as bear you as much good will and wish you as well to do as I do myself.

"At that time he seemed to deny that there was any such thing attempted of his part, and that he never thought to make any enterprize therein.

"I answered, my lord, I am glad to hear you say so ; and giving him exhortation not to attempt the matter, we finished our communication in that behalf for the present.

"Riding in like sort together, within two or three days following, from my lord protector's house unto the parliament house, my lord admiral said unto me, father Russell, you are very suspicious of me. I pray you, tell me who showed you of the marriage that I should attempt, whereof ye brake with me this other day.

"I answered he should not know the authors of the tale, but that I understood it by such as bare him right good will; and said therewithall, my lord, I shall earnestly advise you to make no suit for marriage that way.

"He replied saying, it is convenient for them to marry, and better it were that they were married within the realm, than in any foreign place, and without the realm. And why might not I, or another, made by the king their father, marry one of them.

"I answered, my lord, if either you or any other within this realm shall match himself in marriage either with my Lady Mary or my Lady Elizabeth, undoubtedly, whosoever he be, shall procure himself the occasion of his utter undoing; and you especially above all others, being of so near alliance to the king's majesty.

"And he being desirous to know the cause, I alleged this reason. You know, my lord, that, although the king's majesty's father was a prince of much wisdom and knowledge, yet was he very suspicious, and much given to suspect. His grandfather, also, King Henry the Seventh, was a very noble and a wise prince; yet was he also very suspicious. Which, if it shall so prove, this shall follow, that in case you, being of alliance to his highness, shall also marry with one of the heirs of the crown by succession, his highness may, perhaps, take occasion thereof to have you afterwards in great suspect, and, as often as he shall see you, to think that you gape and wish for his death; which thought, if it be once rooted in his head, much displeasure may ensue unto you thereupon. I added also, and I pray you, my lord, what shall you have with any of them?

"He answered, that who married one of them should have three thousand a year.

"I answered, my lord, it is not so; for ye may be well assured that he shall have no more than only ten thousand pounds in money, plate, and goods, and no land. And therewithall I asked him what that should be to maintain his charges and estate, matching himself there.

"He answered, they must have the three thousand pounds a year also.

"I answered, by G—d! but they may not.

"He answered, by G—d! none of you all dare say nay to it.

"I answered, by G—d! for my part I will say nay to it; for it is clean against the king's will.

"Riding together another time, in like sort together, toward the parliament house, my lord admiral said unto me, what will you say, my lord privy seal, if I go above you shortly? I answered, I should be very glad of his preferment; and, concerning his going above me, I did not care, so that he took nothing from me. Which, my lord admiral's saying, and my answer, I declared to my lord chancellor immediately the same morning."

J. RUSSELL."

—Tytler, i, 142-6.

On the 20th March, 1549, the execution of the lord admiral took place. "On the scaffold," says Dr. Lingard, "the unhappy man loudly proclaimed his innocence: nor will those who attentively peruse the thirty-three charges against him, and the depositions on which they were founded, be inclined to dispute his assertion." On the 22nd January, 1552—not three years afterwards—Somerset himself, after having enjoyed an indulgence which he had refused to his unhappy brother, namely, a trial by his peers, was conducted to the scaffold on Tower Hill. Mr. Tytler expresses considerable doubts whether the protector was really guilty of the crime laid to his charge. That, so far as the charge of treason is concerned, there exists reasonable doubts, we cannot deny; and the judges accordingly acquitted him of that charge. But that he was guilty of the second crime of which he was accused and convicted, namely, of conspiracy to *seize and imprison* the Earl of Warwick, one of the privy councillors—an offence which, by an act passed in the third year of Edward's reign, had been made felony, without benefit of clergy—no one can hesitate to believe who attentively considers the following *Confession of the Earl of Arundel*, which Mr. Tytler has now printed for the first time, from the original in the State Paper Office.

CONFESSION OF THE EARL OF ARUNDEL.

"At such time as the Duke of Northumberland and the Lord Marquis of Northampton were appointed by the king's majesty's commandment to hear the confession of the Earl of Arundell in the Tower; of whom, when he was brought before them, and demanded what he had to say, they declared, also, how, upon his own suit and request, they were sent unto him for that purpose. Who, after some protestations, with much difficulty, as a man loath to say anything that might touch himself, finally confessed these words, hereafter following, or the like, to the very same effect.

"My lords, I cannot deny that I have had talk, and communication with the Duke of Somerset, and he with me, touching *both your apprehensions*; and, to be plain, we *determined to have apprehended you*, but, by the passion of God! quoth he, 'for no harm to your bodies.' And when they asked him how he would have apprehended them, he said, 'in the council.' And when he was demanded how oft the duke and he had met together about these matters, he said, 'but once.'

"And after they had showed him (which was known by the duke's own confession) that the duke and he met sundry times together for that purpose, as well at Sion as at Somerset place in London; with that he sighed, lifting up his hands from the board, and said 'they knew all.'

"And being demanded whether he did at any time send any message to the Duchess of Somerset by Stanhop, the effect whereof was that she and the duke should beware whom they trusted; for he had been of late at Bar-

nard's Castle with the Earl of Pembroke, and did perceive by his talk that he had some intelligence of these matters; but if they would keep their own council, he, for his part, would never confess anything to die for it; he seemed to be much troubled with this demand, and with great oaths began to swear that he never sent no such message to the duchess by no living creature. And being answered, it might be that he sent the message to the duke, he swore faintly, 'By the passion of God, no!' But, being farther charged by the said duke and marquis with the matter, he, perceiving that they had some knowledge of it, finally confessed that he did warn the duke of the premises by Stanhop, but not the duchess.

"And afterwards, when Hampton, one of the clerks of the council, was sent unto him to write all the whole matter, he would, in a manner, have gone from all again; and, in especial, from the last, saying he did not will Stanhop to warn the duke, but only told it to Stanhop. Whereupon the said Duke of Northumberland and the Marquis were eftsoons sent to him again, in the company of the Lord Privy Seal and the Earl of Pembroke; at which time he did, by circumstances, confess the whole premises, saving the sending of Stanhop to the Duke; but nevertheless he said he declared to Stanhop to the duke, to the intent he should warn the duke of it, but in no wise he would confess again that he sent him.

NORTHUMBERLAND,
WM. NORTHAMPTON,

J. BEDFORD.
PEMBROKE."

—Tytler, *ib.*, 43-5.

But it is time to bring the present paper to a close; before doing so, however, we will add a specimen or two confirmatory of the amusing and varied character which we have attributed to the work. The first is from Hoper, Bishop of Gloster, "the sternest and austere" of the Marian martyrs, as he is styled by Fuller. It is addressed to Cecil, and is full of kind remonstrances to him on the universal distress of the poor suffering under the "extreme evil of hunger, and seeing their little cottages and livings decaying daily."

BISHOP HOPER TO CECIL.

(*Orig. St. Pap. Office: Domestic.*)

"17th April, 1551.

"AFTER my very hearty commendations. Altho' I have no great matter to write unto your mastership of, yet duty and bondage requireth me to show mindful of your old and accustomed friendship toward me, and to thank you for the same, with hearty desire you so always continue towards me.

"As for the success and going forthward of God's word, praised be his holy name, every day the number doth increase; and would so do more and more, in case there were good teachers amongst them for the furtherance and help thereof. I pray you, and in God's name require you, that ye stay what ye may, that no man obtain licence to have two benefices, which is a great destruction to this country, dangerous before God, as well to the King's Majesty that giveth it, as to the person that receiveth.

"For the love and tender mercy of God, persuade and cause some order to be taken upon the price of things, or else the ire of God will shortly punish. All things be here so dear that the most part of people lacketh, and yet more will lack, necessary food. The body of a calf in the market 14s.; the carcase of a sheep at 10s. White [wheat] meat so dear, as a groat is nothing to a poor man to be sowing any kind of victuals. All pastures and breeding of cattle is turned into sheep's meat, and they be not kept to be brought to the market, but to bear wool, and profit only to their master. Master Secretary, for the passion of Christ, take the fear of God and a bold stomach to speak herein for a redress, and that the goods of every shire be not thus wrested, and taken into few men's hands. If it continue, the wealth and strength of the realm must needs perish. What availeth great riches in a realm, and neither the head nor the greatest part of the members to be the better for it? You best know.....Apud Justinian, non prosunt.....quoniam non ad commodum reipublice sed ad labem detrimentumque pertinent, inquit.

"So much as have more than enough, buyeth when things be good cheap, to sell afterwards dear. God amend it! It is my bounden duty, and all other true men's, to persuade and teach obedience unto the people: and, thanks be to the Lord! I can perceive none other here but love and reverence among the people to the king's majesty and to the laws; but, Mr. Secretary, it is the magistrates, and their own doings, that shall most commend them and win love of the people. Ye know what a grievous and extreme—yea, in manner unruly—evil hunger is. The prices of things be here as I tell ye; the number of people be great, their little cottages and poor livings decay daily: except God by sickness take them out of the world, they must needs lack. God's mercy give you and the rest of my lords wisdom to redress it, wherein I pray ye may see the occasion of the evil and so destroy it.

"May it please you to be so good as to desire a licence of the king's majesty for me to eat flesh upon the fish days. Doubtless, my stomach is not as it hath been. In case it were, I could better eat fish than flesh; but I think it past for this life. There is also here a wise and sober man, one of the elder men of the town, a good and necessary subject for this little commonwealth here, called John Sanford, that is a weak and sickly man, desired me also to be a suitor to you for him in this case; and, doubtless, we will so use the king's authority as none, I trust, shall take occasion for liberty and contempt of laws by us.

"Thus, praying you to commend me to Mistress Cecil, and to good Mr. Cecil your father, my singular good friends, I commend ye with all my heart and whole spirit [to God], who keep you always in his fear, and give you wisdom and strength to do all things in this high business, troublous and perilous, to his glory. Amen!—17th April, 1551.

"Your bounden for ever to his little power,

"JOHN HOPER, Gloucest. Episc.

"If I dare be so bold of your gentleness, commend me to all my very friends that be of the robes, who have used towards me always, from my first coming to the court, a singular and painful friendship in all business I have had to do."—Tytler, i., 364.

The following quaint epistle from Dean Wotton, the English Ambassador in France, written at the time of Wyatt's conspiracy, must form our last extract from this valuable and amusing work.

WOTTON TO SIR WILLIAM PETRE.

(*Orig. St. Pap. Office*).

"*France, 26th January, 1553-4.*

"SIR,—I thank you much for the promotion whereto you have promoted me by your last letter, but I am sorry you forgot to send me my title and name whereby I should be called, whether it be Yellow Cross, or Green Mantle, or Obscurentius, or such other; for that would have set me well forth pardy, and have made me welcome here, at the least amongst my fellows the heralds.

"And seeing you have made me a herald, though you have poured no bowl of wine on my head, I intend to show you some part of my cunning: and therefore I send you herewith a certain declaration, whereby may appear (as I take it) certain degrees of consanguinity and affinity wherein the Queen's Highness and the Prince of Spain are knit together. But I remember very well that I have oftentimes heard my fellow, Will Somer (God keep him warm wheresoever he be!), say that he would abide by no saying of his; and forasmuch as it is ever good to learn of a wise man, I intend, therefore, in this matter, to learn a lesson of him. And, therefore, I do protest unto you that, as well in this case as in any other concerning pedigrees, whatsoever I say or write, or shall say or write, I intend not to abide by it, but shall refer myself for the truth of it to them that do; *quam protestationem volo semper et ubique pro repetita haberi, exnunc prout extunc, et extunc prout exnunc.* Under this protestation, it shall not greatly force to whom you show it. And although I intend not to affirm either these, nor any other, to be true; yet would I be loath to declare or speak any such thing, but that I had read it before in some book or pedigree.

"And where you would have me move yet more doubts: I am sure you do well remember the old saying, '*Qui nihil scit, de nullo dubitat*;' seeing, then, I know nothing at all of your treaties and doings of this matter, how were it possible for me to consider any such doubt of them? Nor those few doubts whereof I wrote to you before, could I now have thought on unless, by my lord's letter from home, I had learnt that there had been some communication of this marriage; and that, by these men's report here, I understood that the emperor did offer the queen the low country.

"And where I understand that our preachers' rooms at Canterbury shall now be void, I trust, my masters, you courtiers will not take the gift of them from me, to whom it belongeth, and entitle the queen to it by a thing called the king's prerogative, who is cousin-german to the *præmunire*: for no man living knoweth neither the one nor the other, but even as it pleaseth you to be, so it must be a prerogative or a *præmunire*.

"For because I shall be sure never to hear no news from you, my masters, out of England, I intend, therefore, to send you some news from hence. We say here that the emperor requireth a good number of hostages of the queen, for the safeguard of the prince while he shall be in England; which

fable, whether it be true or not, I cannot tell ; but, as I hear, it giveth them here occasion of much mad talk, sounding not most to the honesty of poor England. And thus I beseech Jesu long to preserve you in health and prosperity ! Written at Paris, the 26th of January, 1553.

"Yours assuredly,

"N. WOTTON.

"*Postscripta*.—Since perceiving how I am fallen into this sickness upon so little occasion, to my knowledge, I am half in despair to be able to do the Queen's highness any service here, for this cause ; and also for that, because of this marriage, I think it will be very hard to avoid the war betwixt us and France, the war continuing between the emperor and France, I have the less desire to continue here ; therefore, if you see any good occasion of my revocation, I pray you omit it not : and by the next I pray you to signify to me whether you see any hope of my revocation or not ; and, in case you do, about what time."—*Tytler*, ii., 283-6.

THE MUSICIAN ABOUT TOWN.

THE Italian Opera season closed on the 10th of August, with Mozart's "*Nozze di Figaro*," and the favourite scene from "*Le prova d'un opera seria*," in which Lablache is so conspicuously comical. The first time we heard the Figaro (a prominent item in our chronological history) Fodor was the countess ; Camporese, *la Susanna* ; Ambrogetti was the count ; Naldi the Figaro ; and Angriani, Doctor Bartolo. The subordinates have fled to the limbo of things forgotten. To an organ exquisitely pure, exact, and flexible, and of charming quality, Fodor superadded a richly polished though not redundant style. She was a sprightly and crummy dame, and the first as well as the best—considerably the best—Zerlina that has appeared in this country. Camporese was said to be of aristocratic family and birth. Such was her uniform demeanour on the stage. A more lady-like woman has rarely trodden those boards. She and Fodor ought to have changed characters in the Figaro ; for she was too precisely mannered, as well as graceful, for *Susanna* the waiting-woman. In the *Don Giovanni*, where she performed the part of Donna Anna, the appointments were more judicious. Camporese's voice was on the wane when she came over here ; it had never been powerful, or perhaps of rich quality, and, at the period we speak of, it was somewhat austere : but her style and management of it bespoke the educated musician. Ambrogetti had but an

indifferent organ, and that was nasal ; moreover, he had no style. His performance of the count was only distinguished by a boisterous animal spirit. He did not and could not sing the noble air in the second act, "*Vedro mentre io sospiro.*" Ambrogetti was also our first Don Giovanni, and he played the part like a buffo-brigand, who would carry off women, not from passion, but mere self-will, or for a lark. His last scene, however, was tremendous. Naldi had an agreeable baritone, of medium power and compass. He commenced life as a law-student, and deserted the profession from a pure love of music. His singing was that of an accomplished amateur ; and his acting (he was primo-buffo) that of a gentleman who *condescended* to be humorous ; for Naldi was, by education and cultivated taste, fitted for the best society, and he was appreciated accordingly. In the latter period of his career he became indolent, both as a performer and singer, and was a merciless drag upon the orchestra, being uniformly behind the bar. With such a drawback, his incompetence to fill those bustling characters, the Figaro and Leporello, may be easily conceived ; more so than the combined points of inferiority in his talent, both as a singer and actor, to those of the great artist of the present day. Naldi could not have approached within half a cycle of the accomplishments, natural and acquired, that distinguish an artist like Lablache. Angrisani, the last named in the above list, possessed a noble organ of a large and rich quality, and of unusual compass down the scale. It was metallic in character—a cauldron would have so sung. We have never heard the like effect given to "*La Vendetta*," in the Figaro ; "*O possente Nume*," in the *Zauberflöte* ; or the last scene of the commendatore in the Don Giovanni (for Angrisani played the two characters of the Ghost and Massetto), as by that fine voice. Nature did great things for him, and he was content to receive all she bestowed, without putting it out to interest. Like many of his countrymen, whom their ignorant auditors designate as great singers only because they have great voices, Angrisani was nothing of a musician. We have heard that he learnt all his music mechanically, and that it was played over to him, by the pianist of the theatre, till he had thrummed it into his head. It will be seen from the above estimate (and we feel it to be correct as well as impartial) that the principal characters in Mozart's opera were more worthily sustained this season by Mesd. Persiani and Grisi, Siga. Tamburini and Lablache. The first lady, who performed the part of the countess, was evidently ill at ease in the sustained cantabile of the charming air, "*Porgi amor* ;" for Mad. Persiani has so completely

thrown the whole of her study into the execution of florid difficulties and passages in division, which distinguish the modern Italian school of music, that it is an effort for her to deliver with steadiness a succession of holding notes. In the second movement of the "Dove sono" she was more at home, and here she evinced the cultivated artist; although we cannot add the artist of sentiment. Grisi's Susanna was excellence throughout; easy, lively, and unerring in the concerted movements. Upon this point we were agreeably disappointed both in her and Tamburini, who, as the count, redeemed a long grudging score we have against him. We have never heard him with so much satisfaction as in the air, already alluded to, in the second act. It is of too high a class to be trifled with, and Sig. Tamburini gave full proof of this, not only by his sensible adherence to the text, but his correct expression of the sentiment. But the charm of the whole performance centred in Lablache's Figaro. Whatever this admirable artist undertakes is distinguished by the majesty of a first-rate understanding. His is really the dignity of talent. He never for one moment degrades his art; on the contrary, he elevates into importance what the million would pass by unheeding; and invests with the originality of genius what is already familiar as household bread. He does nothing with effort; whether he sing, or whether he act, all seems spontaneous, and as if he had a store in reserve; and therefore it is that he mystifies the short-sighted judgment, which estimates merit according to exertion, and the display of it. Very few singers besides Lablache have impressed us with the feeling that they are musicians; and very few actors, besides him, that they were possessed of a talent superior to their art. It was an appropriate act, at the close of the performance, to dismiss him with a shower of garlands. Altogether, we have never heard the "Nozze di Figaro" (most especially in the concerted movements) so perfectly performed. The singing was worthy of the orchestra, and that is the highest praise we can offer it.

The "Guglielmo Tell" has at length been performed in England; and, contrary to the anticipation of all who are acquainted with the prevailing taste of the supporters of the Italian Opera, it was repeated six times. It is not that the version of the history is inefficient, which made the audience turn a cold shoulder to the piece—that would rather be a recommendation than otherwise: it is not that the story is the record of a great political struggle against aristocratic tyranny for freedom (and which is the cause of its being prohibited in Austria); neither was the opera indifferently sus.

tained ; on the contrary, it was supported by Persiani, Rubini, and Lablache, also by a very efficient and well-drilled chorus ; and the Grieves contributed their fine talent in a series of superb scenes. Nevertheless, we hear that it was pronounced, by the worshippers of "Anna Bolena," to be heavy and tedious ; the interpretation of which opinion is, that there is a prevalence of concerted and full choral movements, for which the worshippers aforesaid care not one straw. Moreover, these movements are nobly constructed, upon the true choral principle, combining also the purest dramatic effect. With the exception of the fine Handelian movement which opens the "Mose in Egitto," Rossini has never (so far as we have observed) so unequivocally put forth the real power which is in him, as in the five-part chorus in three flats in the Tell, "Gloria e onor ;" also, in the same key, the trio and chorus, "Giuram pel nostro onor ;" and, lastly, in the famous solo and chorus in c, "Corriam o vittoria." These three movements are distinguished by remarkable ease and freedom of manner, with masterly counterpoint. But perhaps the most musician-like composition in the opera is the quintett and chorus in F, "Sole che al mondo." This, from its dignity of character and fullness of the score, is an especial favourite with us. Of the minor concerted pieces, the best are the first duet in E flat, "Ove vai ;" and the terzetto in A three sharps, for tenor and two basses, "Sott' altro ciel." Moreover, Rossini has, in the "Guglielmo Tell," cleverly denoted the characteristics of his principal *dramatis personæ* ; a distinction which, we maintain, forms no prominent feature in his previous works. The musical eloquence of Tell is conceived with majestic energy ; quiet and severe, without a hint of bombast, or vulgar display of any kind. "He is serious in a serious cause ;" and he denotes this by a grave and firm determination of manner. He has no florid solo, flaring about tyranny and liberty, with "gun-drum-trumpet-blunderbuss-and-thunder" accompaniment ; but he is content to knit together and sway his compatriots by short, telling speeches, and cool vigour. The task of rousing and addressing the cantons is given to the young and newly-created partisan and lover, Arnolfo ; the character of whose music is also ably discriminated and preserved. He is the devoted and ardent lover ; and the tenderness which is the prevailing sentiment in his mind, will be found to extend in a degree over his music, in whatever situation he is placed. We would refer to the first duet ; to the cavatina in E three flats, "Asil degli avi miei ;" and to his part generally throughout the concerted movements.

The instrumental score, also, to the "Guglielmo Tell," is of a

very high order. Whatever objection may be taken by the class of critics who maintain that his peculiar style is not calculated to elevate and dignify the science, but, on the contrary, that it has created a passage for an inundation of noise, and trumpery, and unmeaning execution, they will scarcely deny that he is thoroughly acquainted with the resources of an orchestra ; and, if any doubt were to be raised upon the question, the accompaniments alone to this opera would decide it triumphantly in his favour. Not only are they delightfully varied, independent, and original, but they are full and weighty, without overclouding the vocal score. The overture is a composition of ostentatious pretension, and is beyond all comparison the most eminent of his instrumental writings of the same class. It is not without its commonplaces, and passages of *ad captandum* character (for Rossini has always kept his eye steadily fixed upon the "many-headed") ; and assuredly the Austrian march with which it concludes, and which is uniformly encored, is sufficiently vulgar, although characteristic, and certainly treated with cleverness and tact. The storm, too, which comprises the middle movement, would, in all probability, never have been written had the "Pastorale" of Beethoven not been in existence. Notwithstanding all this, take the composition altogether, it is excessively clever and attractive, and the whole opera is so good that it is the one upon which his fame will rest ; unless, indeed, the report be true, that, having realized a princely fortune by catering for the million, he is now engaged upon a work which he is resolved posterity shall not "willingly let die."

The Worcester Musical Festival (the one hundred and sixteenth annual association of the three choirs) took place on the 10th, 11th, 12th, and 13th of September. The first morning, as usual, was appropriated to the performance of the cathedral service ; added to which was the Dettingen te Deum of Handel ; Boyce's anthem, "Blessed is he ;" and Handel's coronation anthem, "The king shall rejoice." On the second morning, Haydn's Creation, and a miscellaneous part, were performed ; Dr. Crotch's Palestine and a selection occupied the third morning ; and the ever glorious, ever-welcome Messiah completed the musical portion of the Festival. The attendance on the first day was the most numerous, and on the last the cathedral was very full, the result principally, no doubt, of the selection ; for the Messiah is the most attractive of all our sacred compositions. But we may also attribute the circumstance to the prices of admission being adapted more to the spirit of the times ; for the stewards, upon this occasion, lowered the tickets for

the side galleries to five shillings. Our readers will probably remember that we last year suggested the experiment of extending the scale of the terms of admission to this sum. We hope the trial may warrant the continuance of it.*

The evening concerts were well attended, except on the first night; and this, by the prescriptive law of custom, appears to be always deserted. No statement of accounts has, as yet, been made public, but it is generally supposed that the receipts will cover the expenses; and it is certain that the collection, which goes without deduction to the charity, amounted to more than £1,000—a sum only once before obtained at any of the one hundred and sixteen meetings. The principal vocal performers were Mad. Persiani, the Misses Woodyatt, Beale, Hawes, and Clara Novello; Sig. Tamburini, Messrs. Vaughan, Bennett, Edmunds, Machin, and Phillips. The concerto performers were Messrs. Blagrove, Willman, and Lindley: and the instrumentalists amounted to sixty-six—not a large number, it is true, but most effective; for they were selected from the best in their several departments in the profession.

On the first morning (Tuesday) the overture to *Esther* was extremely well played, and exhibited the fine band to great advantage, especially in the beautiful and solemn slow movement, where the grand *unison* passages for the basses are so admirably contrasted with the smooth-flowing melody and harmonious combinations of the other instruments. The first burst of the voices in the *Dettin-gen te Deum* was superbly magnificent and quite overpowering. In the succeeding solo parts it would have been better to have assigned the *alto* part to a *male* voice (as intended by the composer),

* In a late number of the *Gloucester Journal*, some of our statements in the article alluded to, upon the festival in that city, have been contradicted. We were not aware that at their performances any of the seats were let at the rate of five shillings. With respect to the prices given to the principal singers, we confess to have written upon the current report in the profession, that Mad. Grisi was to receive four, and Mad. Albertazzi three hundred pounds; and upon the assumed truth of this statement it was, that we protested against such enormous terms being given to one or two individuals, when, upon the plea of incompetency, reduced terms were offered to the band. The writer in the journal will scarcely deny that the principal, if not all the instrumentalists at their festival last year, consented to receive a reduced rate of remuneration. We know that they were given to understand that, if they refused to do so, there was every chance of the festival's falling through for that year. What we objected to was, that a minimum price should be given to one class, in order that another (already overpaid) should have a maximum.

instead of a female voice. In making this observation, we do not mean to insinuate that Miss Hawes did not sing the part correctly ; our objection is of a different nature : it refers to the question, which is the more effective and appropriate expression of the words. Those of the "Te Deum" being of a joyful and triumphant nature, it appears to us that they would be more appropriately expressed by a voice which seems to be exerting its *high* tones, rather than by one that is endeavouring to get down to its *lowest*. Now the great difference between the counter-tenor part, when sung by a male or a female voice, is this—that, although the *pitch* of the note is *exactly the same*, yet, when it is sung by the latter, the effect is that of a lady who is singing *low* notes ; and when performed by the former (or male voice), it is that of a man who is singing *high* notes. There is little doubt that composers in general intend that the part should produce a *high* effect, and the very term, "alto" (or "high"), corroborates the accuracy of this opinion. Not that we object to this part being occasionally taken by a female voice ; on the contrary, there are many compositions, both for solo and of the class of concerted pieces, which have a much more charming effect when the counter-tenor part is taken by a lady. But we think that the decision as to *when* the female or male voice is to be employed should depend upon the style of the music, and the sentiment of the words : and the general rule we should wish to see followed would be this—that where the subject of the poetry is of a tender, delicate, mournful, or pathetic nature, the low plaintive sounds of a woman's voice should be decidedly preferred ; but where the words have an exhilarating, spirited, convivial, or triumphant character, then that part should be assigned to a male voice, as being better adapted to convey their appropriate expression. For instance, the upper part of both the glees, "With sighs, sweet rose," and "The mighty conqueror," is intended for a counter-tenor voice ; but in the former we should prefer hearing a lady, and in the latter a gentleman.

Apologizing for this digression, we proceed to say that the service at the cathedral, on the first morning, was judiciously performed, and that Mr. Phillips appeared to particular advantage in the fine prayer "Vouchsafe, O Lord." We regret that we cannot compliment Mr. Edmunds upon his manner of singing the tenor part of Boyce's charming duet, "Here shall soft charity." His style is too theatrical and violent for church music ; and his manner of shouting out a few particular notes, without any thing either in the words or music to justify this sudden outbreak into a

fortissimo, was offensive to all who admire good sense, and an unpretending deportment, united to a good style and purity of taste in singing ; and who (like ourselves) can recollect the beautiful and appropriately chaste manner in which this choice specimen of Boyce's musical ability used formerly to be sung by Harrison and Bartleman. But as we understand that Mr. Edmunds was originally brought up among the choir-boys of Worcester Cathedral (which circumstance naturally accounts for the kind encouragement with which the citizens received him, and the favourable manner in which they were evidently inclined to view his efforts as a concert singer), we hope that he will endeavour to forget his recently-acquired theatrical and artificial style whenever he is taken back to the good old school of his boyish days, when, as one of the choristers of the venerable cathedral, he had constantly to study the compositions of Orlando Gibbons, Purcell, Jeremiah Clarke, Croft, Battishill, and other great English church composers.

After the sermon (which was singularly ill-timed, both as to matter as well as duration, for it lasted above an hour), Handel's coronation anthem was performed in a very spirited style, both by the band and the choir, although the former accompanied the fine verse, "Exceeding glad," in rather too loud a manner ; so that the vocal quartett (Miss Woodyatt, Miss Hawes, Messrs. Vaughan and Phillips) appeared disproportioned in power, notwithstanding the singers put out their strength. It is mortifying that this defect should be so prevalent among instrumentalists, that the very finest bands are apt to bring upon themselves the reproach of not knowing how to accompany the most simple song ; although they can play the most difficult symphonies of Mozart, Beethoven, &c. which are full of the most complicated variety of effects, and which contain passages requiring the utmost delicacy of execution, in the contrasted *fortes* and *pianissimos*, the slightest lights and shades, and the most minute gradations in the *crescendos* and *diminuendos*, *ralentandos* and *morendos*. We would recommend to those performers who, in accompanying vocal pieces, are addicted to show off their execution and powerful tone at the expense of their good taste and judgment, the advice which Mendelssohn gave to the band under his direction at the recent Dusseldorf festival ; viz. "Whenever a *piano* is marked, instead of trying to let your next neighbour in the orchestra hear *you*, try to subdue your own tone so completely as to hear *him*." The performers there took the hint, and the consequence was that no more rasping in competition was heard, but the exact intentions of the composer were properly fulfilled ; and

the audience had the delight of listening to one of the most impressively grand, rich, and exquisite sounds in the world—the *pianissimo* of a large band. To our taste, the most charming and sublime effect at the Worcester Cathedral was, the chaunting of the responses, *sotto voce*, by the whole choir of voices, left entirely to themselves, without even the organ accompaniment. This morning's performances were worthily terminated by the glorious fugue "Hallelujah," which concludes Handel's "The king shall rejoice," in our estimation, the finest of all his coronation anthems.

Concert, Tuesday Evening.—We were sorry to perceive that a silly custom prevails amongst the fashionable people of Worcester, to think it *angenteel* to be present at the *first* concert of the festival. In consequence of this nonsensical opinion, there was but a thin audience this evening, although the selection was a very good one; containing, amongst other excellent compositions, the "Eroica" sinfonie of Beethoven; Weber's overture to "Euryanthe;" and a charming concerto on the clarinet (which was most delightfully played by Mr. Willman); the classical duet, "Qual anelante," by Marcello (admirably sung, in the purest taste, by Miss Clara Novello and Mr. H. Phillips); the beautiful trio for three sopranis from the "Azor and Zemira" by Spohr, and the delicious air "Dove sono," from the "Figaro" of Mozart.

In addition to these attractions, there was the first appearance, in public, of Miss Clara Novello, since her return from her extensive continental tour. She was received in a most warm and enthusiastic manner, affording a convincing proof that she had lost none of the favour which had formerly been expressed towards her by her Worcester friends and admirers before she left England. She looked particularly well in health, and, though not much taller, she seemed considerably stouter than before she went her round of Germany, Italy, and Russia. She appeared to be in excellent spirits, and sang as if she felt gratified by the friendly greeting she had received, and was resolved to exert herself to the utmost to shew that she was not undeserving of the encomiums that had been passed upon her extraordinary improvement previous to her arrival; and to prove herself worthy of the support of all real judges of good singing, and thus justify the partiality of her friends, who had given her so marked a reception. The song she chose was a new M.S. cavatina, by Paccini, which had never before been performed in England. It consisted of an "Aria cantabile," followed by a brilliant "Allegro finale." The music itself, though not appertaining to the most elevated class of composition, was well calculated to dis-

play the power and flexibility of the singer, and the mastery which she has acquired over the difficulties presented by the peculiar style of the modern Italian school. The comparative ease with which all these difficulties were vanquished, and the spirited energy with which the various passages were executed (a point in which this young lady was formerly supposed, by some critics, to be rather deficient), united to the unrivalled purity of her intonation, and the exquisitely beautiful quality of her voice, rendered her triumph quite complete. As it had been understood that her principal object in going abroad was to render herself familiar with the present style of Italian singing, she evidently made a point of exhibiting the result of her study; and by her performance this evening she gave an undeniable proof that she had accomplished her object.

Mad. Persiani, who appeared for the first time at Worcester, was received in a manner that must have convinced her of the indulgent liberality of feeling towards foreign artistes, for which the English public is so justly renowned. Her voice appears to us of rather a thin quality, and in her mode of executing difficult passages there is too great an appearance of painful effort and over-strained exertion; and (what, in our estimation, is a much more important defect) she is deficient in the refined perception of musical beauty; of the varied and appropriate expression; of the contrasted sweetness and energy, and the profound passionate feeling, which are requisite, in order to do justice to Mozart's divine compositions, and other productions of the highest school of art. For instance, in the "*Dove sono*"—a strain expressing tender and melancholy regret at the loss of the "*bei momenti di dolcezza e di piacer*," which the Contessa formerly enjoyed with her husband—Mad. Persiani totally mistook the sentiment and character of the melody, and sang it in a loud and boisterous manner. What is a little remarkable, her reading of the passage was different when we heard her, only a few weeks before, at the Opera House. The "*Fioriture*," also, upon the present occasion, were not in character with the solidity of Mozart's style, but belonged to the school of Bellini, Donizetti, and other writers of that brilliant but tinsel class. Although we think that Mad. Persiani cannot sing the German school of music, yet we readily acknowledge her superior ability, flexibility of voice, and extraordinary management of her upper notes (especially the *B* flat, *c*, *c* sharp, and *D*), when exerted in her proper province, which we take to be the lighter class of Italian operatic music. We were corroborated in this opinion by the effect she produced by her clever performance in Rossini's bustling quintetto, "*O guardate che accidente*," from "*Il*

Turco in Italia ;" and we were still more pleased with her in the "Aria di bravura" from Bellini's "Sonnambula." From the novel and varied ornaments which she introduced (all which *belonged to the proper chords and harmonies in the score*, a circumstance that some singers are apt to neglect, or of which they seem totally ignorant), we should guess that Mad. Persiani has had very able professors for her instructors, and that she is herself a good musician.

Miss Hawes (who sang extremely well through the whole of the performances) accompanied herself on the piano forte, in a very unpretending manner, in a little ballad of her own composition ; and the performance seemed to give general satisfaction to the audience. The latter did themselves great credit, and evinced their good taste and judgment, by encoring the charming trio in G by Spohr, which was first performed at Covent Garden Theatre by Miss Inverarity and the two Misses Cawse, and which was on this occasion delightfully sung by Miss Clara Novello, Miss Woodyatt, and Miss Hawes.

Mr. H. Phillips also distinguished himself by his chaste and manly style of singing a new cantata by Barnett, which contains an obligato accompaniment of a very elaborate and difficult construction for the violoncello, and which was played by Mr. Lindley (for whom it was expressly written by his son-in-law) with his usual incomparably fine tone and masterly execution. The concert terminated with Weber's popular quartett, "Over the dark blue waters," from the opera of "Oberon ;" and the audience departed apparently delighted with their evening's entertainment.

Wednesday Morning.—The oratorio of "The Creation" was the treat provided by the conductor, Mr. Charles Clarke, for our gratification this morning ; and we felt the more obliged to that gentleman (who has raised himself higher than ever in the estimation both of the public and his brother professors, by the sound judgment he has displayed in the musical selections ; by his quiet, steady mode of conducting the performances ; and by the obliging politeness with which he has behaved towards every one during the present festival) for his retaining the *whole* of this charming specimen of Haydn's genius, instead of following the tasteless, injudicious custom that had but too long obtained of mutilating this fine composition by the entire omission of the third part. Another improvement was, the assigning the *whole* of the songs belonging to the respective characters in the oratorio to *the same singer*, instead of the absurd plan of giving some of Raphael's songs to be sung by one performer, and some by another. Which plan is about as wise as it would be to give the first soliloquy in Hamlet to Mr. Macready ; the second to Mr. Vandenhoff ; the

closet scene to Mr. Phelps ; the interview with Ophelia to Mr. Elton ; and the scene with the gravedigger to Mr. Anderson. On the present occasion the conductor very properly preserved the consistency of the oratorio, and the *oneness* of the composer's intention, by assigning throughout the part of Gabriel to Miss Clara Novello ; Uriel to Mr. Bennett ; Raphael to Mr. H. Phillips ; Eve to Miss Woodyatt ; and Adam to Mr. Machin.

We never heard the "representation of chaos" (which is, in our estimation, the greatest piece of *inventive* genius in harmony that Haydn ever accomplished) performed with such mysterious and impressive effect as it was by the fine band collected together this morning. Our limits will not allow of our entering into a detail of each movement (although, were it left to our willingness, it would be a most pleasant task for us to revel in) ; we therefore confine ourselves to a few remarks upon the most prominent features of the performance.

Miss Clara Novello always appears to the greatest advantage when she is singing good music ; and the better it is the better she sings it : for this reason, we ourselves prefer hearing her pure and beautiful voice employed in the performance of the enchanting compositions of Mozart ; the refined and tasteful productions of Haydn ; the imaginative and strikingly original inventions of Beethoven ; and the solemn, sacred, and sublime works of Handel. She was in remarkably fine voice this morning, and exerted herself with particular fervour and energy, filling the cathedral with her powerful high notes (especially the *c in alt* in the brilliant solo, "The marvellous works"), and making the vaulted roofs and ancient aisles absolutely *ring* with the reverberation of her sustained tones : which peculiar effect we attribute to the circumstance of all her intervals being exactly and *perfectly* in tune. In the air "On mighty pens," the person who accompanied her on the flute (a foreigner, who, we understood, had never before taken a part at any of the provincial festivals) spoilt the effect of one of her cadences, by bursting in upon the passage before the discordant interval had been properly resolved ; but she adroitly contrived to hide his mistake, so that very few among the uninitiated part of the audience were aware of his blunder : and she then finished the air with the same vigour and decision as if no interruption had been given to her part of the performance. Her singing of the favourite song "With verdure clad," and of the sweet and musician-like trio, "On thee each living soul," was absolutely perfect : and it appeared to be the general feeling, not only among the audience, but

in the orchestra, that no other English or foreign singer of the present day could have sustained the part of "Gabriel" with such tasteful accuracy and delightful effect.

Miss Woodyatt also acquitted herself in a highly creditable manner in the pieces that had been assigned to her; especially in the duet with Adam, "graceful consort." The great drawback to the pleasure which we should otherwise derive from this lady's performance is, a continued *tremor* in the upper part of her voice, when she attempts to sustain her notes. We at first attributed this tremulous effect to nervousness; but as we noticed that some of her lower tones were held steadily, and without the least appearance of alarm, we are therefore, compelled to conclude that the tremor of the high notes, to which we have alluded, is a defect in the vocal organ; and we counsel the young lady to endeavour to remedy it without delay, lest it degenerate into an unalterable and irremediable weakness of the larynx.

Messrs. Phillips, Bennett, and Machin (the first more especially), did ample justice both to the songs and concerted pieces; as did also the orchestral instrumental performers and vocal band to the full pieces and choruses. Of the latter, "The heavens are telling" was so splendidly performed, with its magnificent climax at the termination of the "coda," that we felt grateful to the bishop (who presided) for his judicious discrimination and excellent taste in coming forward to request it might be repeated at the end of the oratorio, to which it formed a glorious conclusion.

The miscellaneous part began with Croft's grand anthem (in the real church style) "Sing unto God," with its fine specimens of "augmentation" in the counterpoint of the last chorus, "Great is the Holy One of Israel;" after which a Miss Beale, with whose name we were not before acquainted, presented herself to sing Handel's recitative and air, "If guiltless blood." We have heard this fine song so effectively performed by Mrs. Wood (the former Miss Paton) that we do not consider ourselves fair or unprejudiced judges of its merit when other performers attempt it. The words "I triumph in my fall," seemed to be wholly misunderstood by Miss Beale, who sang them in a tame, sleepy tone, at total variance with the sentiment intended to be conveyed both by the poet and the composer: and this drawing of the first part of the air completely spoiled the contrast designed by Handel in the exquisitely placid and resigned character of the last movement, at the words "Oh, righteous Heaven, thy will be done!" This lady appears to have some injudicious friends, if

they have induced her to come forward and aspire to the rank of a principal singer at a large festival. Miss Beale may probably be capable of singing a simple ballad in a drawing-room; but her voice is weak, her intonation imperfect, her time wavering and undecided, and the qualities of her vocal powers and musical acquirements seem to us (as far as we have had the means of judging) not to be of sufficient strength or extent to justify her advisers in counselling her to pursue a professional career of so ambitious a nature.

Sig. Tamburini, who also made his first appearance on this occasion before a Worcester audience, introduced a bass song from "*La Passione*," by Paesiello. The composition was rather a poor commonplace affair, not at all worthy of the author of "*La Nina, pazzà per amore*;" and the manner in which it was performed was not calculated to raise it much higher in the estimation of good judges. We here repeat that we do not rank ourselves among the admirers of Sig. Tamburini, who, in our opinion, is indebted for the reputation he has acquired, not to any genuine or sterling qualities as a singer, but to his having administered to the puerile, depraved taste of the frivolous portion of the Italian Opera frequenters, by indulging them with a continual succession of unmeaning roulades, and a series of restless runnings up and down the scale, and other nonsensical and contemptible flourishes. To our taste, the style of Sig. Tamburini is wearisomely monotonous and intolerably tiresome.

After Miss Hawes had sung (transposed to c) the solemn prayer "*Lord, to thee*," which Bartleman—who was the greatest and most intellectual singer that England has produced, for grandeur, poetical conception, and purity of style—used to deliver in so impressive and masterly a manner, then came the movement from Handel's "*Suites de pieces*" known by the name of "*The harmonious blacksmith*," which has been so ingeniously adapted for a full orchestra by the late Mr. Greatedorex, who was for many years conductor of the king's concerts of ancient music. This piece formed one of the greatest treats of the selection, principally from the wonderful manner in which that incomparable man, Sig. Dragonetti, played his part on the double bass. The rich and grand tone he produced, the skilful method of bowing, and the distinct articulation of the most rapid passages and divisions, rendered his playing this air with variations one of the most extraordinary performances of the whole festival.

We should have admired Mr. Edmunds more if he had imitated Mr. Braham less in the "*total eclipse*;" nor do we approve of the ab-

surd custom which he followed of pronouncing "no *sun*" as loud as he could bawl, and then "no *moon*" with his voice sunk to a whisper. It would be difficult for Mr. Edmunds to point out any thing in the text or the music to justify this alternate shouting and whispering of those words?

Miss Woodyatt sang "Angels ever bright," in an appropriately subdued tone and calm style; and after the choral fugue, "Let none despair"—a piece of cleverly constructed counterpoint that deserves to be more frequently performed—Mr. H. Phillips afforded us a high gratification by the dignified simplicity of style in which he sang the song from Joshua, "Shall I in Mamre's fertile plain." Our satisfaction would have been complete had the charming chorus, "For all these mercies" (and which ought to have followed, according to the original score), been retained as a continuation and proper conclusion to the preceding bass song.

But the most prominent feature of the miscellaneous act was the singing of "Let the bright seraphim," by Miss Clara Novello, accompanied by Mr. Harper on the trumpet. The vigour and energy which she threw into her manner of singing this very trying song, and the admirable way in which she was supported by Harper, were such as to elicit a unanimous request for its repetition; and, notwithstanding the exhausting nature of the song, the second performance was even more spirited than the first. The effect of this triumphant effort was absolutely enthusiastic, and justified the opinion, which was almost universally expressed, that the young lady had now proved herself, beyond dispute, the Queen of English singers.

Concert, Wednesday Evening.—We shall refer but briefly to the remaining performances. The principal features of this evening were, the overtures to "Egmont" (Beethoven) and Rossini's "Guglielmo Tell"—particularly well played, and the latter deservedly encored; the duet, "Oh guardate," by Mad. Persiani and Sig. Tamburini, which we candidly own to have heard much more effectively sung by Mad. Grisi and Sig. Lablache; Bellini's "Casta Diva," remarkably well sung by Miss Novello; the fine sestett from the Don Giovanni, "Sola sola;" Phillips's ballad "Woman," archly delivered, and encored; Bishop's glee, "Blow, gentle gales," in which Miss Hawes appeared to great advantage; a violin concerto by Blagrove, rather deficient in vigour, but admirable for beauty of tone, graceful bowing, and correct execution; and, lastly, the duet between Persiani and Clara Novello, in which the palm for superiority was

ably contested. As far as regards clearness and neatness of execution, it was difficult to decide which was the better; but as regards power, sweetness, and beautiful quality, with purity of intonation, the fresh and *young* voice of Miss Novello carried the day decidedly in favour of our countrywoman. Persiani made greater exertions than usual, and appeared much gratified to find herself so equally supported and seconded in all her brilliant efforts, even in her own peculiar Italian dramatic style, by a young English singer. The success of the duet was complete; and nothing but the exertion required to do it full justice prevented a demand for a repetition of the performance.

Thursday Morning.—We consider Dr. Crotch's oratorio of "Palestine" to be a work which does honour to the English school of composition. Besides the fine chorus, "Let Sinai tell"—a piece of genius that *any* composer might justly feel proud of having produced—there are many songs of a very tasteful class, and several concerted pieces admirably written, both as regards the vocal parts and the scoring for the instruments; especially the quartett, "Lo! star-led chiefs," charmingly sung and judiciously encored; and the still finer sestetto, "Lo! cherub bands;" both which are full of delightful effects and musician-like contrapuntal contrivances. The next time this oratorio is performed, we would advise the conductor to have the semi-chorus, "The voices of the dead," sung, not (as on this occasion) by *single* voices, the effect of which is meagre and unsatisfactory; but by half a dozen well-chosen voices to each part: and to let them steal in quite pianissimo. A little more force, also, should be given to the common chord of D natural (the flat seventh of the tonic), where it is so boldly introduced before the chord of E four sharps, just before the conclusion of this imaginative concerted piece, which is so ingeniously descriptive of the "Songs of other days;" the two adjoining common chords, to which we have adverted, coming against each other in contrary movement, produce a most quaint and antiquated effect that is in perfect keeping with the words, and carry back the thoughts of the hearer to the times of the ancient Ambrosian chaunt, or the days of old Tallis. Notwithstanding that the listener is occasionally reminded of Haydn's style, and still oftener of Handel, in some of the movements of "Palestine," yet we repeat that it is a production of very high merit, exhibiting considerable inventive power, and very great professional ability in the symmetrical construction of its melodies, the solidity of its harmonies, and the orchestral developement of its elaborate counterpoint; and we hope that a more just and honourable tribute of respect to its able compo-

ser will be paid in future, by the more frequent performance of so fine a specimen of the English school of composition.

In the miscellaneous part that followed, Miss Hawes sang the air from Samson, "Return, O God of Hosts!" with appropriate expression; but we must quarrel with the conductor for the omission of the beautiful chorus, "To dust, his glory," which forms the proper completion of the movement in the score, and which, though but rarely brought forward, is one of the finest models of solemn harmonies applied to the illustration of peculiar phrases in poetry, in all Handel's works. We never can forget the effect of this chorus at Exeter Hall.

In the sacred scena of W. H. Calcott, entitled "The last man," we admired Mr. Phillip's polished and manly style of singing more than the composition itself; the latter appeared monotonous and uninteresting.

Cherubini's charming motett, "Hear my prayer" (taken from a Latin offertorium, "Ave Maria"), presented us with one of the most delicate and refined pieces of scoring that we heard during the whole festival. It was very tastefully sung by Miss Woodyatt, and delightfully accompanied by Willman; except in a little trip he made in the time, by playing a passage of *semi-quavers* as if they had been *quavers*.

After Haydn's favourite national "Hymn to the emperor" (which was encored) Mr. Machin sang Handel's bass song, "He layeth the beams;" succeeded by the chorus, "Cherub and Seraphim;" the points of imitation in which were not taken up with sufficient promptitude and decision by the singers, who appeared to be not well acquainted with the piece, or not to have rehearsed it with proper care. And then Mr. Bennett sang the tenor song, "Lord, remember David." We remember having heard this beautiful specimen of the placid *cantabile* style sung in the utmost perfection by Harrison, at the ancient concerts; but he always sang it to the original words, "Rendi il seren' al ciglio," and in the original key, \flat five sharps. Mr. Bennett judiciously followed his example in the latter instance, instead of adhering to the more modern practice of transposing it a semi-tone lower, to \flat flat.

Next came the most brilliant performance of the morning, the song "From mighty kings," which Mrs. Salmon used to sing with so great an effect, that it was supposed she had made the song entirely her own, and that no one else would ever again attempt it in public; but Clara Novello has evidently studied every phrase of the

melody with the greatest care; and she has succeeded in giving the song a new reading of her own, which is of a much more spirited and triumphant character than what has hitherto been given to it by other singers. We have noticed in the foreign papers that she introduced it, not only at Mendelssohn's Leipsic concerts, where it was enthusiastically encored, but that she has sung it at Berlin, Vienna, and all over Germany, where it has constantly been more popular than any of her other Handelian songs. On the present occasion there was such a demand for its repetition, that the bishop again came forward to express the general desire. After the beautiful and pathetic air by Pergolesi, "Sanctum et terrible nomen"—better known as set to the English words "Lord, have mercy upon me"—in which Sig. Tamburini produced little or no effect, especially upon those who, like ourselves, can remember the absolutely perfect manner in which Bartleman used to breathe forth this earnest prayer, the morning's performances were delightfully terminated by Beethoven's masterly chorus, "Hallelujah," from the "Mount of Olives."

Thursday Evening.—The third evening concert took place in the Hall, which was the old "refectory" in the days of the jolly monks, and it is one of the finest rooms for sound we were ever in. It is to be regretted that modern architects do not study the principles of acoustics with more attention, when employed to build a concert-room, and endeavour to find out what proportions are the most favourable for the proper increase and propagation of musical sounds, without degenerating into an echo, or such a reverberation of the different discords and harmonies as to produce indistinctness and confusion. We have heard a good judge of such things say that the best proportions for a music room are those of a *double cube*; and we incline to think he is about right, as the justice of his theory is strongly corroborated by the fact of the Guildhall in London being one of the very finest rooms in the kingdom for the effect of music (as was acknowledged by all the professors present on the occasion of the grand concert given there a few years since, for the benefit of the Spanish refugees), and that the Guildhall is built very nearly in the proportions of the double cube.

The most prominent features this evening were Cherubini's overture to "Anacreon;" a song, by Miss Clara Novello, of Mercadante's, admirably sung in the Italian style: but as she had already exhibited that she was mistress of this school of vocalization, and that she could give the requisite effect to the present Italian opera music, as well as to the oratorio school of Handel, if she chose to do

so, in compliance with the fashionable taste of the day, we wish she had indulged us with one of the sterling airs of the most enchanting of all composers—Mozart, instead of the bravura by Mercadante. We could have wished to select the “Non pui di fiori” from “La clemenza di Tito,” which, now that we have lost the inimitable Malibran, no one can sing so well as Miss Novello. We should have been the more interested in hearing this particular air, as we have heard that the last time she sang it, was to Mozart’s widow, when she visited her at Salzburg last year, and when the latter could not repress her tears and emotion, but at last caught the singer in her arms, declaring she had not been so much affected by any musical performance since her husband’s death.

Blagrove’s violin concerto was a still more effective performance than the one of the preceding night, and elicited great and well-deserved applause.

The song of young Wesley’s, though remarkably well sung by Phillips, rather disappointed us: we expected a more musician-like production from the pen of one who is said to inherit so large a portion of his father’s genius.

In the air “Batti batti” (injudiciously transposed to G, instead of retaining the original key of F) Mad. Persiani was too violent: she appeared to have totally forgotten the text, where the poet makes her say “La tua povera Zerlina! starò qui come *Agnellina*.” But her loud tone and boisterous manner by no means resembled a “little lamb;” nor was the manner in which she shouted the running passages in the last movement at all in character with the playfulness and coaxing archness which Mozart has thrown into this fascinating song of the village bride and coquette, Zerlina. Mad. Persiani, however, made up for this failure in Mozart’s music (which she evidently does not comprehend) by her spirited performance of the air “Come per me serena,” by Bellini. Here she was completely at home, and afforded the highest gratification to the audience, who expressed their satisfaction by the most enthusiastic applause.

Miss Woodyatt sang Haydn’s popular little canzonet, “The Mermaid,” very prettily; and obtained an encore by her mode of introducing unexpectedly a high note (G above the staff,) after making a long shake on D, the second of the scale.

But one of the greatest treats of the evening was the duet between Lindley and Dragonetti, from the fifth opera of Corelli. It was the one in F (forming No. 4 of the set), and was played in a style of mastery and perfection that will never again be heard from any other

two performers. Long may those "Siamese twins" of the orchestra remain inseparably at their posts, to delight us over and over again with their unrivalled and unapproachable performances !

After some tasteful and well-contrasted Russian, German, and Scotch national airs, archly sung by Miss Novello, the concert was terminated by the anthem of "God save the queen."

From the lateness in the month, and the necessity of our number going to press with the quantity of matter it has under this head, it has been impossible to include an account of the Norwich performances, which concluded on the 20th.

THE SERVANT MARIE.*

THERE are minds which emulation spontaneously inflames: There are privileged spirits which, from situations the most obscure, and amidst circumstances the most unpropitious, shine with uncommon lustre, and achieve the most extraordinary results. Of this truth, the poor servant girl, whose interesting history was related to us by Dr. Corona, affords a memorable illustration.

This physician, long since dead, was himself an accomplished scholar. Unhappily driven, by political events, from Italy, the land of his birth, he sought refuge in Paris. There his worth and distinguished professional talents were soon duly appreciated. Corona was especially remarkable for the interest and variety of the anecdotes with which his mind was stored, and for his extensive erudition. On every subject of discussion or inquiry, his information was so correct, and his memory so inexhaustible, as to charm and astonish all who heard him. On an evening passed at his house, in the enjoyment of his delightful society, he detailed to us the following history:—

One of the most celebrated sculptors of Rome had a female servant named Marie. Born in a miserable cabin, of indigent and obscure parents, this young woman was yet distinguished by the elegance of her manners and the dignity of her deportment. Figure to yourself a young village girl, of physiognomy more striking than beautiful; of extraordinary vivacity of look, yet diffident, thirsting

* From the French of Alibert.

for instruction ; hearing everything, and forgetting nothing which she heard ; executing with the utmost dispatch her domestic duties, in order to gain time for occupations more worthy of her genius ; always thoughtful, yet passing with rapidity from the depths of reverie to the loftiest flights of enthusiasm, yet inaccessible to all the characteristic weaknesses of her sex ; and you will have a correct idea of this extraordinary young creature, whose name was destined to become historical. By listening to the conversation of the great men who resorted in an evening to the house of her master, she appears to have become initiated into the mysteries of their art.

Persons situated in the lower ranks of society are rarely smitten with the love of fame. To this rule the character of Marie exhibited a striking exception. At first, content with cherishing the most fervent admiration for the works of the celebrated master whom she served, she was soon seized with the ambition of gaining the applause of him whom she looked upon as an object of the deepest veneration. An artist of talent who frequented her master's house, and to whom she had communicated her extraordinary project, consented to give Marie clandestine instruction in the hours of leisure from her domestic occupations. Dr. Corona, to whom the important secret was confided, from that moment declared himself her *Mecenas*, and even contributed largely to the expences of her instruction. On her own part, the diligent girl most vigorously exerted herself to turn to the best account the services of her enlightened and philanthropic benefactors. The passionate emulation with which she was inspired never forsook her, nor even flagged. Her activity knew neither limit nor relaxation. An impulse, secret as it was powerful, directed all her faculties towards the goal of distinction, which she burned with noble ambition to attain.

Marie was gifted with a powerful imagination : every object in nature struck upon, and was reflected from, it. Qualities so distinguished, existing in a person utterly deprived of early instruction, might well excite astonishment and admiration. She dated her existence only from the day on which she commenced the study of sculpture. Never was she found in a state of inactivity. The hope of success was the prevalent idea in her mind—her ruling passion. On feeling the slightest relaxation of her ardour, she instantly repaired to the Vatican, there to rekindle the flame of inspiration. Frequently was she seen in the churches of Rome, seeking to penetrate the sublime ideas of the illustrious artists by a contemplation of the master-pieces of their genius. Whole hours

— — —

were spent by her at the feet of the ancient statues, and objects which the vulgar gazed upon with indifference excited in her bosom the deepest emotion.

Marie studied sculpture, not as an art, but as a science. She had quitted the fields to tread the classic ground of genius, and was no longer the same creature as heretofore. Every truth germinated and became matured in proportion as it sunk into her mind.

The frigid spirit alone can contemplate without emotion the ruins of mighty Rome. All is solemn in this city of inspiration. Every thing concurs to stir up and expand the mind by the most noble and affecting recollections. The column, the obelisk, the mausoleum, the sarcophagus, all address themselves, in tones of irresistible eloquence, to the observant artist ; and from the sepulchre of the illustrious dead bursts forth a flame, to illumine and animate the living.

Determination is the most precious attribute of genius ; it may even be regarded as the guerdon of success. Marie resolutely triumphed over every obstacle in the study of an art so apparently incompatible with the weakness of her sex ; but she was impelled by the most potent of all moral influences—the influence of enthusiasm. This estimable young woman did not, however, wholly escape the envenomed shafts of calumny. The low-minded and the sensual, estimating the conduct of others by the base and diminutive standard of their own principles of action, and actuated by a wish to reduce to their own state of insignificance the lofty spirit which proudly soars above them, invariably trace to some polluted source aspirations of which their sordid nature is utterly unsuceptible, and motives which they can never comprehend. By such as these it was shrewdly insinuated that, in the incredible efforts made to obtain the honours of a public triumph, and acquire the approbation of her honoured master, Marie had been principally influenced by the sentiment of love. But Marie was impelled by a nobler principle. There is, in the culture of the fine arts, a charm which serves, like the influence of religion, to elevate the soul, and purify it from the taint of earthly corruptions. Marie was inaccessible to the vulgar passions ; and virtue imparted an additional energy and grace to the ardour which was destined to immortalize her name.

Truths, in proportion as we endeavour to conceal them, become the more indelibly engraven on the memory. Marie listened with avidity when her master expatiated to his pupils on the value and importance of moral expression in the arts of imitation ; and, eager

to imbibe every expression which might forward her mind in the attainment of striking results, lost not a syllable of these interesting discussions. On one occasion, at a feast given in celebration of her master's birth-day, a warm dispute arose among the guests on the pre-eminence of sculpture over painting. Marie, who waited at table, was present at this interesting and (to her) most instructive discussion. Her zeal was especially excited when she heard them discourse on the influence of study, and of the supreme qualities by which the opposite talents of Raphael and Michael Angelo were distinguished.

Patience, without which nothing great can be achieved, is not always the associate of genius. Marie, however, exhibited extraordinary perseverance in all which she undertook ; and every moment which she could steal from her ordinary occupations was sedulously devoted to the composition of the beautiful work destined shortly to excite astonishment, even in the connoisseur. After two years of clandestine and unwearied labour, Marie produced a statue of Minerva, which looked as though animated with the breath of life. The production, although destitute of the perfection of art, yet exhibited all the expression which the ideal world can supply, or the impassioned soul communicate—all the majesty of celestial existence.

Some days after the judges assembled to pronounce their opinion, and to award the prize, in the midst of a crowd of rival artists. What renders it more particularly interesting is, that the master of Marie presided over this memorable jury. Every vote was given in favour of the statue of Minerva, which had been secretly conveyed to the spot, and which, in its execution, exhibited traces of the most extraordinary talent ; but no one imagined for an instant that it could possibly have been the result of the efforts of a woman. In the mean time Marie, unnoticed in the simple habiliments of her lowly station, had found her way into the gallery where her master-piece was exposed to the public inspection. Astonished and overwhelmed by the evidences of her success, she swallowed with avidity the praises lavished upon her beautiful production. Not a criticism was heard to detract from the joy of her triumph ; the spectators were charmed. The talent which seeks to conceal itself is peculiarly an object of admiration and indulgence.

Marie's happiness, however, was greatly enhanced when, on returning to her master's house, she heard him, in the presence of his friends, bestow the highest eulogies on the successful statue. His conjectures upon the probable author of this piece were, how-

ever, fruitless ; and he attributed its execution to a young artist of the most promising talent, but who, in all probability, wished, for the present, to remain unknown.

But the admiration inspired by success frequently produces a nervous agitation in the object of it, which cannot be concealed. Marie burst into tears upon hearing the applauses of the company, and thus discovered the secret. Her master, who had no idea she had ever studied the fine arts, remained for some time motionless with surprise. He then complimented her, in the dignified language of emotion, on her splendid success ; and informed her that she should no longer remain in his service, and, resolving thenceforth to afford every facility for her instruction, he assigned his own study for her peculiar use. Marie, overwhelmed with confusion, knew not how to express her gratitude. The joy of Corinna, upon being conducted to the capitol, could not have been greater than hers.

But Marie was not destined long to enjoy the advantages resulting from her memorable triumph. Like a meteor, she blazed but for a moment, and as quickly disappeared. Spent by fatigue and loss of rest, she fell a victim to consumption's withering influence. Dr. Corona, who had felt so deep an interest in her success, exhausted the resources of his beneficent art on this melancholy occasion ; but he could not ward off the blow of death from the pure and noble heart which had throbbed only for reputation . and soon the laurels of Marie were exchanged for the sable habiliments of the tomb. All who had known this interesting young woman sincerely lamented her untimely fate.*

This history was related to us by Corona, in illustration of the power which example exercises upon real talent. "Genius," he observed, "is the gift of Heaven ; but emulation constitutes the influence by which it is rendered productive."

M. J. P.

* Marie was known only for a short time at Rome, by the success which we are about to describe. She died at the age of twenty-six, from exhaustion and excess of labour, some years previously to the commencement of the French Revolution. We have seen an old man at Paris who had been personally acquainted with this interesting young woman : he describes, in glowing colours, the happy disposition which she evinced. Her talents appear to have been developed with inconceivable rapidity. At this period, Corona was distinguished at Rome by his great success in the practice of medicine. He was a very learned man ; and had acquired a profound knowledge of all the various branches of literature and philosophy. He was said to resemble a living encyclopædia.

“IT IS NO FICTION.”

I ARRIVED in the small neat town of —, in the north of England, on a bright day in June ; and having refreshed myself after my journey, I strolled out in the afternoon to see the beauties of the surrounding neighbourhood. I bent my steps towards the churchyard, which is situated on a hill a little way out of the town, in the centre of which is placed the beautiful old church, with its Gothic door-ways. This building was erected, I believe, in the reign of Henry V., and was used, in former days, as a monastery.

The town of — lies in a hollow, and on its left winds a bright river ; and, as a background to the picturesque church, we have the ever-moving sea, and the Lake Hills, with their mist-crowned summits. Not a hundred yards from the church stands the old castle, with its ancient gateway, its castellated turrets, and its old portcullis, its discoloured walls bearing the impress of Old Time.

I have said it was a bright afternoon in June, and the air was redolent of perfume. The sun shone, and the mighty sea rolled on. The birds warbled their simple melody ; and there was a balmy softness in the air, which breathed of repose and peace. Now and then the elegant branches of the weeping ash bowed low to the passing breeze ; and occasionally might be heard the shrill call of the parent bird, as she gathered her young ones to their gentle home. The beautiful river, as it glided by so musically, looked like a sheet of bright silver ; and the small boats, as they skimmed its surface, only ruffled for an instant the calm stream, and left a track of more brilliant whiteness than had been visible before. It was a time for contemplative devotion, a time for the heart to commune with its God ; and as I gazed upon the silent resting-places of so many who had departed, my soul was gently attuned to that harmony which is not of the earth—a harmony which breathes of heaven. My thoughts wandered to the many who had passed away ; to the aged who had trod life's weary pilgrimage ; to the youthful who, in their spring's gay blossoming, had been snatched away ; and some there were who, in their bud of infancy, ere sin had scathed them, had been taken away from this world of woe, and placed in the realms of bliss. *Why* should we mourn these joyous beings ? they are in a haven of peace, and “*there is no night there.*”

At some little distance from the stone on which I was seated, I observed a lonely grave ; and from its desolate appearance I was the more attracted, and bent my steps towards it. It was a plain

stone, bearing only the initials "C. L., aged 17;" no year to tell the passer-by when the mouldering body was deposited there: but the stone was discoloured, and in places broken, and the long grass grew in confusion near it. "So young and so early taken?" thought I; "what is thy history, departed one? Have any mourned thee, or wert thou laid here unhonoured and unknown?"

As I stood gazing I was roused by the sound of approaching footsteps, and an old man, bearing a spade, passed near me. At the same time I heard the deep tones of the passing bell, and I saw a mournful funeral procession winding slowly down the narrow pathway. The old clergyman, with his waving white hair and his solemn voice, reading that magnificent service of our church, broke the stillness which *had* prevailed; and the smothered sobs of the bereaved told a tale of deep suffering. Instinctively I joined in prayer the weeping assembly: and more than human would have been the heart which could have beheld unmoved the agonized parent, as he saw the last hope of a family—the last child of his house—"the solitary scion of a time-honoured race"—committed to the cold earth. Then, indeed, *all* was over—*all* had departed! While the inanimate corpse was in the house, there was still something to be done which a parent feels to be a consolation. There is the cold hand to touch and the pale forehead to kiss; and there is a silence which it is holy to observe. But to return home after a funeral, and to find that your house is *indeed* desolate—that the being so loved, so watched, so idolized, is more than dead, is gone—then comes over the mourner's heart that feeling of loneliness—that darkness of the soul—which is so difficult to dispel, so terrible to witness; and as night comes on, as darkness covers the sky, then we feel that our child is *indeed* gone, and that the cold earth is his resting-place. For a time, I say, these thoughts *will* intrude; for a time the spirit *will* be brought low; and agonizing thoughts *will* rush back to the day when he who is dead was a bright infant, a smiling boy, a delicate youth, a dying man! And then again will come over the brain, with a terrible reality, the moanings of pain, the convulsive death-struggle, the rigid mouth, the far-off look into eternity of the dying, the cold form of the loved one, the narrow coffin, the booming death-bell, the hearse which conveys him to his grave, and, lastly, the hollow-sounding earth, as it for ever encloses him. Then the mourner feels that *all* is over; and in the deep midnight of the soul prays to that God who will help, to that father who will comfort. He remembers the words of

consolation in the burial service, "I am the resurrection and the life!" He is comforted; a new joy breaks in upon him, a new light cheers him. He can hope to join that departed spirit in the realms of bliss, where there shall be no more death.

But to return from this digression. I must own I had felt a lively interest and an earnest desire to learn more of the history of the young person whose grave I have before mentioned; and I had determined to endeavour to obtain from the old sexton some account of one who had so early been summoned. To save my readers some trouble, I will at once proceed to relate a history, during the recital of which I could not help shedding some tears, though the old man, with the garrulity attendant on age, was almost tiresome in his detail.

In the year 1815, the London mail arrived heavily laden in the town of —, and stopped at the inn to change horses before it proceeded further north. As Mrs. S——, the landlady, a kind and excellent person, opened the door of the coach, and offered refreshment to the inside passengers, her attention was drawn to a young person who appeared either ill or unhappy, judging from a low moaning sound which proceeded from the part of the vehicle in which she was seated. The offers of assistance made by Mrs. S—— were apparently thankfully received; and in a gentle voice, a voice of most sweet melody, she was asked if she could give accommodation for the night. This was answered in the affirmative, and the lady left the coach. Her fellow passengers remarked that she appeared ill; one thought her unhappy, another unfortunate; but all agreed that she was eminently beautiful, and as the mail drove on a few sighs were given to her memory.

The young lady (for such she was) appeared in a state of great agitation, and asked for a quiet bed-room. This was provided for her, and to it she was at once shewn. The kind old hostess left her, that she might in some degree recover from the agitation under which she laboured; and with the promise to return soon with some tea she left the young sufferer to her sorrowful solitariness. Night drew on; and feeling anxious, she knew not why, to see her young guest, Mrs. S—— knocked at the door of the room in which she had left the stranger. No voice answered to the summons, and she went in unbidden. The fair creature rose from the position in which she had been discovered; for she was at prayer, and her face bathed in tears. She thanked the good old lady for her watchfulness, and again desired to be left alone. Mrs. S—— had been a

mother ; and with all a mother's tenderness she could not help feeling much anxiety respecting this young creature, about whom there seemed some mystery.

She had not retired to rest above an hour when she heard the bell of the green-room (the room in which the lady was) ring violently, and, rising in haste, she herself answered the summons. In a voice of agony, her guest requested at once medical assistance. Accordingly Mr. H——, the principal surgeon in the town, was immediately summoned. After some short delay he arrived, and was introduced to his young patient. As he entered, she was standing in the middle of the floor, looking eagerly and wildly towards the door. Her figure was wrapped in a long white dressing-gown, and her black hair hung in tangled masses over her shoulders. Her fair brow was shaded by a few stray ringlets ; and as she gazed with that searching look of agony the big tears rolled down her pale cheeks. Beautiful she was—exquisitely beautiful ! Her delicate hands were clasped upon her bosom : and she had more the appearance of a fair spirit from another world than a living tenant of this. Mr. H—— saw that she was wretched ; and in a kind and gentle tone he desired to hear the cause of her distress. Her agonized sobs for awhile stopped her utterance ; and, throwing herself on her knees before Mr. H——, with a desperate effort, but in a voice of thorough misery, she detailed to him the sad history of her short life. Sacred were the disclosures she made, and known only to that benevolent man, who, with his accustomed tenderness, drew forth tale of woe. Let us, also, draw a curtain over the sorrows of that night.

The morning dawned ; and with the first beam of the rising sun was heard in that sick chamber the tender wailing of an infant, and the heartfelt cry of the young mother. For one moment only was there ought like joy ; and then, with a burst of agony which it was dreadful to hear, she cried, "Oh ! my father, could you see me now !" This was all that escaped her : without a murmur she bore her trial.

The day closed, and evening drew on ; evening with her thousand stars, and her bright moon : and with the night came death. Death in that sick chamber—the young, the fair one, the unfortunate ! She died without discovering her name or her residence. There she lay in her young beauty. Calm and very still was the countenance ; pale and like marble were her striking features. Her clear smooth eye-lids were closed over those lustrous orbs ; and the black lashes rested like a silken curtain on her beautiful cheek.

The lips were slightly parted ; and she looked more like a sleeper than one who had for ever ceased to breathe. One white hand was placed under her cheek, and the other lay motionless and marble-like on the white coverlid. On the middle finger of her left hand was a diamond ring ; but there was no wedding-ring. She evidently had not been the happy wife of the man she had loved, and who had deceived her.

Oh ! thou destroyer of a father's joy ; thou base betrayer of a young girl's trust ! Didst thou feel no pity when thou sawest before thee the beautiful victim of thy black persuasion—the wreck of a chaste daughter—the madness of a doting father—the alleloquent appeal of that once innocent girl ? justice, retributive justice will overtake thee, thou foul one ! Guard well the daughters of thy house, be watchful over *their* innocence ; for the destroyer may creep in as *thou* didst, the destroyer may blight thy most idolised one—the one whose beauty has been extolled, whose artlessness had captivated, whose fascination had bewitched. It may be thy sad punishment to see this being—so loved, so worshipped—bowed low, degraded, lost. Then will come over thy mad brain the memory of thy own black arts ; and she who had trusted thee will come back again, in her young beauty, as thy accusing spirit. Thou wilt see her gliding between thee and happiness. Again will come over thy brain that "habit of unutterable thoughts," that sportive elegant girl, that ruined woman, and phrensy will seize upon thee with his own grasp, and fix thee captive in his clanking chains.

Many and various were the enquiries made respecting her ; the guard of the coach from London was questioned, and he could give no satisfactory reply. He well remembered that on the evening of a day in the early spring a young lady appeared at the mail office *alone*, and booked her place to Carlisle ; and at the proper hour she again appeared alone, took her seat in the mail, and did not alight any where until she arrived as already described.

Mr H—— most unweariedly endeavoured to trace some friend to whom she had been dear : but all in vain. And she was buried : this frail and beautiful one was taken to her last home, and no relation mourned for her. Time passed on, and the circumstance, so interesting at the period, was almost forgotten. Winter had set in ; and the flowers which, in the summer time, had bloomed on the silent and solitary grave of the unfortunate, had faded and died with the chilling frost.

One evening in December Mr. H—— had returned from a long and cheerless ride, and was musing over the fire in his lonely drawing-room, when he was roused by the sound of carriage wheels, and

a rapid and loud knocking at his hall door. Almost immediately afterwards a tall gentleman in deep mourning was ushered in, who, without giving any name, seized Mr. H—— by the hand, and in a hoarse voice desired a little conversation with him. After some slight hesitation, the gentleman drew from his pocket a newspaper, and, pointing to an advertisement, desired Mr. H—— to give him all the particulars. On looking at the paper Mr. H—— discovered that it related to the interesting subject of the present story, and with unaffected feeling and simple truth related every minute circumstance connected with the tragedy.

The gentleman placed his hands before his face; but the large tears *would* force themselves through his emaciated fingers, and his manly figure was bent in sorrow, or convulsed in agony. But when Mr. H—— related the particulars of the death-bed, the gentleman started up, and with a cry of anguish exclaimed, "My own Constance! my own dear Constance!" Overpouring and awful were the sobs that shook the bosom of that stranger.

Mr. H——, respecting his sorrow, withdrew for a while, and when he re-appeared the gentleman was again calm; calm, I say, but there was a settled sorrow; and that majestic forehead, with its arched brow, and the deepest blue eyes, had all the appearance of premature old age. The hair waved in thick curls; but they were bleached by sorrow, and the once powerful figure had shrunk. With a peculiar calmness he drew near to Mr. H——, and said, "*Show me her grave*": and they went out in that cold moonlight. As they drew near the solitary grave, again was that manly form bowed low; again the bitter tears fell fast; and, throwing himself on the simple mound, he embraced again and again the cold earth. The inanimate clay answered not; and a painful calmness again came over that living sufferer. Without a word they left the church yard, and walked silently to the house of Mr. H——; when, placing a purse of gold in his hand, with a fervent pressure and a muttered "God bless you!" the gentleman hurriedly left him.

In a few months from this time a sculptor arrived from London, and, directed to the spot by Mr. H——, placed the simple stone over the grave of the young and the lovely. For about five years, in the sweet spring-time, a gentleman was seen to visit this grave; but no one was ever able to discover his name or his place of abode. Whether he was the seducer of the unfortunate girl, or her unhappy father, has never been discovered. Mr. H—— was of opinion that he was the former; but nothing certain is known, and all is left to the imagination.

THOUGHTS ON POETRY, &c.

By S. K. B.

POETRY is the setting forth and describing the creations of fancy, and the imaginations of the mind, in measured lines and numbers, and in well-according sounds and terminations ; and is universally acknowledged to be the most beautiful and attractive species of composition. Prose is the common every-day language of all mankind, the cold, calculating language of business and worldly avocations, the plain unvarying retailer of fact and reason ; the hackneyed jade that is driven and galled by each one as he chooses. Poetry is that language which all would fain speak, yet only a few gifted mortals are allowed to express ; a language which appeals, not to the understanding, but to the heart ; not to the talents of the mind, but to the passions of the soul : to those passions which are implanted more or less in every breast ; a language which arouses our energies and most exalted aspirations, awakens our warmest sympathies and most tender affections, and not unfrequently calls forth a tear. In all ages, in all countries, it has been held in the greatest veneration and esteem, and recourse always had to its assistance, in order to raise men's minds to a higher and more excited state of sensibility, to animate them with courage, to inspire them with tenderness and pity. Nothing so stirred the blood of the ancient Briton, or led him on to such acts of fame and glory, as the sublime and touching rhapsodies of his country's bard. In its page all may find some relief, some consolation, something they can appropriate to themselves. To the gay it tells of mirth and pleasure ; to the sorrowful, of retirement and solitude, and of that time when sorrow shall be no more ; to the brave and aspiring heart, of praise, and honour, and glorious victory ; to the lover, of beauty, and sentiment, and passion. Its voice touches every bosom, pierces every heart, strikes home to every soul : all feel its magic influence. With such powers, then, it is no wonder that poetry should command universal admiration and respect, and that many should wish to attain its spirit.

Some may think, perhaps, that by dint of labour and application, by adhering to some fixed rule, and by following some certain method, they may become poets. But far from it. Poetry is the work of no labour, the result of no perseverance, the production of no effort. 'Tis the voice of Nature, given by Nature herself. The

poet is so from his birth ; poetry is ingrafted into his soul, and flows easily and unconstrainedly from his lips. He needs no learning, no wisdom of books ; he is (as Dryden said of Shakspeare) naturally learned ; he needs not the spectacles of books to read nature ; he looks inward, and finds her there. Poetry will break forth from the soul wherein it dwells, will be restrained or curbed by no obstacles or discouragements ; though doubtless there are circumstances in which it will flourish better than in others. Still we have instances of poetical genius in almost every grade and condition of life, from the poor and the rich, the peasant and his lord, the weak and the powerful, the prosperous and the destitute, the despairing and the glad ; from all poetry has burst forth as the language of their hearts, the overflowing of their burdened spirits. That state, however, which seems to suit it best is the middle one ; a state which is equally removed from either extreme ; one in which the mind is not likely to be tormented by the cares and miseries of indigence, or allured by the pleasures and amusements, "the pomps and vanities" of rank and opulence : but being, as it were, in a passive state, freed from any great disquietude, and attracted by no particular delight, will naturally be inclined to think and to meditate, and to have recourse to its own powers for occupation. Most of our distinguished poets have risen from the middle walks of life ; though he who towers proudly above the rest, "in virgin pride of place," was himself among the high-born and the gay ; yet it was not in the midst of his prosperity and of his pleasures, it was not when he moved in the highest circles of fashion and splendour, that even he, whose genius was all-powerful, produced those mighty works which have gained him undying honour ; but when he had experienced some of those reverses which threw such a gloom over his manly spirit, when he was languishing, a voluntary exile from his own country, it was then that (feeling himself, as it were, thrown out of the world, he flew for refuge to his own high mind and glorious imagination ; it was then that his brightness shone forth and his beauty was conspicuous. It has been said of the naturalist that he must be a good man ; may we not also say it of the poet ? Must not he who can excite the tenderest affections and the noblest sympathies in the mind of man, himself possess a noble heart and a feeling soul ? Must not his own spirit be imbued with those good and heavenly sentiments which he can so well communicate to that of others ? Surely it must ; and such, indeed, is the case.

Most of those who have gained any distinction as poets have been

remarkable for a natural goodness and generosity of temper, a heart feelingly alive to the wants and miseries of his fellow-creatures, a high sense of independence and honour, and contempt of the petty mennesses of the world. And their faults will be usually found to proceed from the carrying these same feelings to an extravagant and romantic height not at all consonant with the general notion of moderation and prudence. The heart, however, is still naturally good. Pride and passion may hold sway and dominion over it, yet, at the core, at the root it is fresh and green. And is it not better to err on this side than on the other? is it not better to err from a heart that is over fraught with sensibility, than from one that is devoid of warm affection and generous animation, one that is hardened down into a mere lump of apathy and worldly selfishness? surely it is. Rhyme, was said by Milton, to be an unnecessary adjunct of poetry; he considered that it cramped the energies of the mind, and was a troublesome bondage to the powers of genius. "Perhaps," says that subtle critic Dr. Johnson, "because it was easier to write blank verse he persuaded himself it was better. Be that as it may, Milton himself has left us a proof that, in his own case at least, it was unnecessary. No one would wish his sublime poem to be other than it is. Rhyme indeed maketh not poetry. It is the thought, the feeling which immortalises verse. Yet still, it cannot be denied that it invests our language, which abounds with so many harsh words and ill-sounding consonants, with an elegance and refinement, and gives it a grace and a charm, which nothing else can communicate. Blank verse often approaches to a somewhat rough and cumbersome style, while it is the province of rhyme to soften all down into a smooth and harmonious concord, and to render perfect what before might seem unfinished and rude. It may fetter the flights of the mind, or curb the soarings of imaginative genius. But it is no displeasing chain, no ignominious slavery. It is even as the bridle to the impatient steed, which serves but to render his fire and beauty more conspicuous and more admired. In dramatic writings, and in those in which loftiness of the subject demands a wide range for thought and expression, it may be dispensed with; but who can read the inimitable lines of Byron, and say that rhyme is unnecessary there, that it fetters his genius. If Milton had been alive to hear them, he would not have given utterance to the afore-mentioned sentence. It matters not much, however, for poetry, whether it be in blank verse or rhyme, as long as there are hearts to feel, will continue to wave her sceptre over them, since the love of it is natural to man.

CRITICAL NOTICES OF NEW PUBLICATIONS.

Festus. A Poem. London: William Pickering. 8vo., pp. 360.

THAT fond desire, that longing after immortality, which seems to pervade intuitively the human mind, is ever prompting it to inquire into the profound mysteries of death and the grave, and vainly to dive deep into the dark and hidden things of futurity. The *cui bono* of life is a question that has agitated the inquiring spirit of man in all ages. That we live, and move, and will, and act, are principles universally admitted, because they can be made manifest to our reasoning powers; but the end and object of our being is concealed from us in the unfathomable depths of creative wisdom. With this yearning for the knowledge of an after state, is combined the wish to possess superior power and intelligence in our present condition. These motives have inclined men, from the earliest periods, to seek and create in imagination subtle and immaterial agents, to whom supernatural qualities are assigned, and who are made to exercise a certain influence over man, sometimes imparting to him the secrets appertaining to the world of spirits, and sometimes placing in his hand the magic talisman of power and knowledge. The extravagant fictions of the heathen mythology, the gross absurdities of pagan superstitions, the innumerable and entertaining fables found in the customs and literature of oriental nations, and the forms, ceremonies, and traditions connected with the Celtic and Gothic ritual, all have their sources in the same cause. Writers in all times have found in the marvellous and supernatural most powerful auxiliaries; for it is easier to rouse the speculative dispositions of the mind than to find fresh materials for its observant faculties; and we find authors in the remotest days introducing imaginary and spiritual beings to take part in the living dramas then depicted. During succeeding ages, the supposed intervention of genii, fairies, demons, elves, sprites, and all the tribe of the invisible and unknown, was acknowledged, and its belief characterized with a peculiar colouring the literary productions of different epochs. Milton and Shakespere well knew the exhaustless springs that flow from a free and fertile imagination; and how easy it is to accomplish the wildest phantasies, and to people worlds before never dreamt of, from the storehouse of an unbounded ideality. In more modern times, the *Faust* of Goethè and the dramas of Lord Byron but embody the vagrant traditions of bygone years; and the thousand German legends of mystery and magic show that the same feeling still exists.

The poem of *Festus*, now under our notice, is characterized by a vivid and highly-wrought imaginative style; and though the plot

is not altogether original, still there is much that is novel and masterly in its treatment. This work may in truth be considered an extraordinary production, and is evidently the offspring of a glorious and surpassing genius. The author has withheld his name, but from the dedication it appears that the boy has scarcely passed into the man; and though such a work might perhaps have been more elaborately finished had the dispassionate hand of time been permitted to cull out some of its too exuberant clusters, still there is so much in it of the pure and exalted spirit of poesy, and so many of those bright scintillations that only flash from a glowing intellect, that it engages and at once absorbs our strongest sympathies. We profess to analyze rather than criticise; but in this instance we cannot refrain from expressing the pleasure we have experienced from the perusal of *Festus*. In the progress of this notice we shall take occasion to give several extracts; but the book must be diligently and attentively read in order to form a just estimate of its value. The first scene is laid in "heaven;" and this, with two or three similar ones, we cannot but think the least agreeable in the work. Any attempt to dramatize the attributes of the Deity, if not presumptuous, is certainly objectionable; for the most exalted human imagination must ever prove utterly inadequate to conceive or convey the most remote idea of the sublimity and power of the Creator's words and ways. The introduction of the Deity by Milton into an epic poem has always been pleaded as an authority by subsequent writers; but would it not be better to attempt to imitate the lofty strains of beauty and adoration that emanate from the immortal bard, rather than copy what, to say the least of it, is a questionable taste? Lucifer appears before God, and asks permission to tempt a soul on earth, which is granted. The hymns of praise from the cherubim, and the mournful lament of the angel of earth over the coming doom, are beautifully expressed.

Festus is next introduced. The following soliloquy, which we give, will serve to show some of the powers of the author, and to display the peculiar character of the hero, who is fated, but unknowingly, to be the last man.

"This is to be a mortal and immortal!
 To live within a circle: and to be
 That dark point where the shades of all things around
 Meet, mix and deepen. All things unto me
 Shew their dark sides; somewhere there must be light.
 Oh! I feel like a seed in the cold earth;
 Quickening at heart, and pining for the air!
 Passion is destiny. The heart is its own
 Fate. It is well youth's gold rubs off so soon!
 The heart gets dizzy with its drunken dance,
 And the voluptuous vanities of life
 Enchain, enchant, and cheat my soul no more.
 My spirit is on edge. I can enjoy
 Nought which has not the honied sting of sin;
 That soothing fret which makes the young untried,

Longing to be beforehand with their nature,
 In dreams and loneless cry, they die to live;
 That wanton whetting of the soul, which while
 It gives a finer, keener edge for pleasure,
 Wastes more and dulls the sooner. Rouse thee heart;
 Bow of my life thou yet art full of spring!
 My quiver still hath many purposes;
 Yet what is worth a thought of all things here?
 How mean, how miserable every care!
 How doubtful too the system of the mind!
 And then the ceaseless, changeless, hopeless round
 Of weariness and heartlessness and woe
 And vice and vanity! Yet these make life;
 The life at least I witness if not feel.
 No matter! we are immortal. How I wish
 I could love men! for amid life's quests
 There seems but worthy one; to do men good.
 It matters not how long we live but how.
 For as the parts of one manhood while here
 We live in every age; we think and feel
 And feed upon the coming and the gone
 As much as on the now time. Man is one:
 And he hath one great heart. It is thus we feel
 With a gigantic throb athwart the sea
 Each others' rights and wrongs; thus are we men.
 Let us think less of men and more of God!
 Sometimes the thought comes swiftening over us
 Like a small bird winging the still blue air;
 And then again at other times it rises
 Slow, like a cloud which scales the skies all breathless;
 And just over head lets itself down on us.
 Sometimes we feel the wish across the mind
 Rush, like a rocket roaring up the sky,
 That we should join with God and give the world
 The go-bye: but the world meanwhile turns round,
 And peeps us in the face; the wanton world;
 We feel it gently pressing down our arm;
 The arm we had raised to do for truth such wonders:
 We feel it softly bearing on our side;
 We feel it touch and thrill us through the body:
 And we are fools and there's an end of us.
 We are originally but a wreck;
 There is nothing sound about us. End us God!
 It is a fine thought that sometime end we must.
 There sets the sun of suns! dies in all fire
 Like Asher's death-great monarch. God of might!
 We love and live on power. It is spirit's end.
 Mind must subdue. To conquer is its life.
 Why madst thou not one spirit like the sun
 To king the world? And oh! might I have been
 That sun-mind, how I would have warmed the world
 To love and worship and bright life!"

Lucifer now appears, and proffers to Festus unbounded power and intelligence, provided he will obey him. He resists for some time, but finally accepts the offer. The spirit and language of the dialogue is finely conceived and executed. The next scene is "mid-night," which is described beautifully thus:—

"All things are calm and fair, and passive. Earth
 Looks as if lulled upon an angel's lap
 Into a breathless dewy sleep : so still,
 That we can only say of things, they be !
 The lakelet now, no longer vexed with gusts,
 Replaces on her breast the pictured moon
 Pearled round with stars. Sweet imaged scene of time
 To come, perchance, when this vain life o'erspent
 Earth may some purer beings' presence bear ;
 Mayhap even God may walk among His saints
 In eminence and brightness like yon moon
 Mildly outbeaming all the beads of light
 Strung o'er night's proud, dark brow."

Love—that all-powerful actuating principle of life—is made to exercise its absolute control over Festus. Beauty has for him a charm, an irresistible spell ; to him the world and all things in it seem invested with a lovely halo of brightness and beauty. He desires Lucifer to call up the spirit of his departed Angela. She appears, and his tale of woe and passion is strikingly told. The language of Lucifer is bold, and frequently sublimely impious.—Referring to the end of all things, he says :—

"I bear, have borne the ill
 Of ages, of eternities ; and must.
 I care not. I shall sway the world as now,
 Which worse and worse sinks with me as I sink,
 Till finite souls vanish as a vapour ;
 Till immortality, the proud thing, perish ;
 And God alone be and eternity.
 Then will I clap my hands and cry to Him,
 I have done ? Have Thy will now ! There is none but thee.
 I am the first created being. I
 Will be the last to perish and to die."

We are next introduced to Clara, in whose gentle embrace Festus seems, *man-like*, totally to have forgotten the lost Angela. We extract the following scene, which will serve to display the rich vein of metaphor which, like a golden thread, is interwoven throughout the whole texture of the work.

"CLARA.

I think not all with thee.
 Have I not heard thee hint of spirit Friends ?
 Where are they now ?

FESTUS.

Ah : close at hand, mayhap.
 I have a might immortal ; and can ken
 With angels. Neither sky nor night nor earth
 Hinder me. Through the forms of things I see
 Their essences ; and thus, even now, behold—
 But where I cannot show to thee—far around,
 Nature herself ; the whole effect of God.
 Mind, matter, motion, heat, time, love and life

And death and immortality ; those chief
And first-born giants all are there ; all parts,
All limbs of her their mother : she is all.

CLARA.

And what does she ?

FESTUS.

Produce : it is her life.
The three I named last, life, death, deathlessness,
Glide in elliptic path round all things made :
For none save God can fill the perfect whole :
And are but to eternity as is
The horizon to the world. At certain points
Each seems the other ; now, the three are one ;
Now, all invisible ; and now, as first,
Moving in measured round.

CLARA.

How look these beings ?

FESTUS.

Ah ! Life looks gaily and gloomily in turns ;
With a brow chequered like the sward, by leaves
Between which the light glints ; and she, careless, wears
A wreath of flowers ; part faded and part fresh.
And Death is beautiful and sad and still :
She seems too happy ; happier far than life ;
In but one feeling, apathy : and on
Her chill white brow frosts bright a braid of snow.

CLARA.

And Immortality ?

FESTUS.

She looks alone ;
As though she would not know her sisterhood.
And on her brow a diadem of fire,
Matched by the conflagration of her eye,
Outflaming even that eye which in my sleep
Beams close upon me till it bursts from sheer
Overstrainedness of sight, burns.

CLARA.

What do they ?

FESTUS.

Each strives to win me to herself.

CLARA.

How ?

FESTUS.

Death
Opens her sweet white arms and whispers, peace !
Come say thy sorrows in this bosom ! This
Will never close against thee ; and my heart,
Though cold cannot be colder much than man's.

Come ! all this soon must end ; and soon the world
Shall perish leaf by leaf ; and land by land ;
Flower by flower ; flood by flood ; and hill
By hill away ; Oh ! come, come ! Let us die.

CLARA.

Say that thou wilt not die !

FESTUS.

Nay, I love Death.
But Immortality, with finger spired,
Points to a distant, giant world ; and says
There, there is my home ; Live along with me !

CLARA.

Canst see that world ?

FESTUS.

Just : a huge shadowy shape ;
It looks a disembodied orb : the ghost
Of some great sphere which God hath stricken dead :
Or like a world which God hath thought ; not made.

CLARA.

Follow her Festus ! Does she speak again ?

FESTUS.

She never speaks but once : and now, in scorn,
Points to this dim, dwarfed, misbegotten sphere.

CLARA.

Why let her pass ?

FESTUS.

That is the great world question :
Life would not part with me ; and from her brow
Tearing her wreath of passion-flowers, she flung it
Around my neck and dared me struggle then.
I never could destroy a flower : and none
But fairest hands like thine can grace with me
The plucking of a rose. And life, sweet life !
Vowed she would crop the world for me and lay it
Herself before my feet even as a flower.
And when I felt that flower contained thyself
One drop within its nectary kept for me,
I lost all count of those strange sisters three ;
And where they be I know not. But I see
One who is more to me."

After a long dialogue between Lucifer and Festus, the former proposes to take our hero an hour's ride ; and we are introduced to our old acquaintances, the black steeds of Mephistopheles. The two equestrians set out at forty railways speed ; and after galloping over Europe, Asia, and Africa, addressing in passing a few words to each state and empire, they cross the broad Atlantic, and traverse the vast mountains and interminable plains of America. *This morning*

airing is spiritedly described, and concludes with the following apostrophe to England:—

“England! my country, great and free!
Heart of the earth, I leap to thee!
How shall my country fight
When her foes rise against her,
But with thine arm, O sea!
The arm which thou lent'st her?
Where shall my country be buried
When she shall die?
Earth is too scant for her grave:
Where shall she lie?
She hath brethren more than a hundred,
And they all want room:
They may die and may lie where they live:
They shall not mix with her doom.
Where but within thine arms,
O sea, O sea?
Wherein she hath lived and gloried,
Let her rest be!
We will rise and will say to the sea,
Flow over her!
We will cry to the death of the deep,
Cover her!
The world hath drawn his sword,
And his red shield drips before him.
But, my country, rise!
Thou canst never die
While a foe hath life to fly;
Rise, land, and gore him!”

The next scene is a village feast, where a ballad singer, a parson, a cryer, a constable, a farmer, two or three women with sweet-hearts, and a student, appear on the stage. The language here is generally somewhat meagre and commonplace, and the design is but indifferently carried out. We are next transported to the planet Venus, which is termed another and a better world, and is supposed to be inhabited by *semi-glorified* spirits. The following extract will serve to show the author's power in the poetry of description.

“This is a world where every loveliest thing
Lasts longest; where decay lifts never head
Above the grossest forms; the flower fades not—
The beautiful die never, here: Death lies
Adreaming—he has nought to do—the babe
Plays with his darts. Nought dies but what should die.
Here are no earthquakes, storms, nor plagues; no hell
At heart; no floating flood on high. The soil
Is ever fresh and fragrant as a rose—
The skies, like one wide rainbow, stand on gold—
The clouds are light as rose-leaves—and the dew,
’Tis of the tears which stars weep, sweet with joy—
The air is softer than a loved one's sigh—
The ground is glowing and glistening with gems,
And with all precious ore, like a bride's bosom—

The trees have silver stems and emerald leaves—
The fountains bubble nectar—and the hills
Are half alive with light."

The next hundred pages are occupied with the sayings and singings at a party of pleasure, a sort of *love court*, where a number of characters are introduced who very familiarly address each other as Will, Ned, Frank, Harry, Nell, Sophy, &c. All the sayings and singings, however, are on one string—*love! love! love!* One might imagine that the writer had sent his scrap-books (commencing with a nursery one) to the compositor, with directions to set up every stanza having the word "*love*" in it, without much respect to sense or connection. Festus is made into a perfect gay Lothario, and even Lucifer himself becomes a victim to the tender passion, and really pays some "*devilish*" pretty compliments. The whole scene is out of keeping with the rest of the book, and materially reduces its standard of excellence. We do not altogether find fault with the mode in which the scene is exhibited, for it has many merits; some of the songs are beautiful, though occasionally the poetical license has been stretched to the utmost limits of endurance. But we condemn the introduction of such an episode in a work like "*Festus*," which bears a higher stamp of genius than usually characterizes the lays of Troubadours, or the dialogues of "*bon vivants*" and "*roués*."

We now return to the legitimate walk of the poem. Festus is carried by Lucifer through space; various worlds are visited, heaven itself is entered, and the horrors of hell powerfully depicted. There are some new ideas and arguments put forth upon the abstruse and endless question of the origin of evil. On their return to earth, Festus describes to Clara what he has seen; and this extract is the last our limits will now permit us to give.

"A sound, then, first
I heard as of a pent-up flood just burst:
It was the rush of God's world-winnowing wing;
Which bowed the orbs as flowers are bowed by breath of spring.
And then a voice I heard, a voice sublime—
To which the hoarded thunders of all time
Pealing earth's death-knell shall a whisper be—
Saying these words—Where will ye worship me?
Ay, where shall be your Maker's holy place?
The Heaven of Heavens is poor before His face.
How shall ye mete my temple, ye who die!
Look! can ye span your God's infinity?
Hear, mighty universe, thy Maker's voice!
Let all thy myriad, myriad world's rejoice!
Lo! I your Maker, do amid ye come,
To choose my worship and to name my home.
This heard each sphere; and all throughout the sky
Came crowding round. Our earth was rolling by,
When God said to it—Rest! And fast it stood.
With voice like winds through some wide olden wood.

Thus spake the One again : behold, O earth !
 Thy parent, God ! it is I who gave thee birth.
 With all my love I did thee once endow ;
 With all my mercy—and thou hast them now.
 But hear my words ! thou never lovedst me well,
 Nor fearedst my wrath ; dreadst thou no longer hell ?
 Dreamest thou that guilt shall alway mock those fires ?
 That deathless death which hell for aye expires ?
 Should all creation its rebellion raise,
 I speak, and this broad universe doth blaze—
 Pass like a dew-drop 'neath mine angry rays—
 Blaze like the fat in sacrificial flame :
 And that burned offering, when I come to claim,
 Its scorching, quenchless mass, all, I will pour
 Upon thy naked soul :—canst thou endure ?
 He spake ; and, as the fear-fraught words flew past,
 Earth fluttered like a yellow leaf in their blast.
 Am not I God ? Answer me ! Hope not thou,
 Impenitent, to ward my righteous blow.
 Yet, come again ! my proffered mercy hear !
 Rejoice and sing ! sweet music in thine ear
 And peace I speak : seek but to be forgiven :
 Repent ! and thou shalt meet thy God in Heaven.
 Go ! cleanse thy brow from blood, thy heart from crime,
 And on thy Saviour call while yet is time !
 Now to this universe of pride and sin
 I speak, ere yet I call mine angels in.
 Draw nigh ! ye worlds,—and, lo ! their light did seem
 Before His eye paled to a pearl's dull beam.
 Attend ! said God—o'er all He lift His hand.—
 Where will ye set my tent ? where shall my temple stand ?
 And all were dumb. Distracting silence spread
 Throughout that host as each were stricken dead.
 I made ye ! I endowed ye ! ye are mine !
 Then trembled out each orb : Thine, God ! for ever thine !
 All that ye have, within myself have I ;
 God, am complete ; full inexhaustibly.
 I dwell within myself, and ye in me,
 Not in yourselves ; I have infinity.
 The everything in all things is my throne ;
 Your might is my might ; and your wealth mine own :
 'Tis by my power and sufferance that ye shine :
 I live in light and all your light is mine."

The work concludes with the destruction of the world and the consummation of all things. We have before said that Festus contains proofs of high genius, but not of matured intellect. There is frequently an over-straining at the sublime, a mistaking of long words for fine ideas ; and occasionally an unfortunate practical "*bathos*" destroys all the sublime allusion ; nevertheless there is much rich imagery and lofty conception, and a considerable acquaintance with the philosophy of man. Of the religious opinions expressed we say nothing : they are, perhaps, somewhat peculiar. The object of this notice is to draw attention to the literary merits of the work. The writer appears to have a most acute perception and appreciation of the sublime and beautiful. There will, doubt-

less, be many dull, cold, every-day souls, who will look upon Festus as a mere rhapsodical effusion; but all those who love to trace the thousand changeful and sparkling streams that spring from the fountain of the human mind, to enrich with their jewelled sands the waste of life, will read Festus with intense interest and delight.

Annales des Sciences Naturelles, comprenant la Zoologie, la Botanique, l'Anatomie et Physiologie comparées de deux regnes, et l'Histoire des corps organisés fossiles; rédigées, pour la Zoologie, par MM. Audouin et Milne Edwards, et pour la Botanique, par MM. Brongniart et Guillemin; royal 8vo, Paris, 1839.

AMONG the European periodicals devoted to the cultivation of natural history, the *Annales des Sciences Naturelles* have long enjoyed a high and well-merited reputation. With the present year the *eleventh* volume of the *second* series of these valuable annals commences; and, in exhibiting an outline of the journal, we adopt the original arrangement, beginning with

JANUARY; ZOOLOGY.—This section comprises nine articles, most of which form important experimental disquisitions.

I. *Professor Raikem*.—Researches, observations, and experiments on the Theridion *marmignatto* of Volterra (the Aranea *tredecimpunctata*), and on the effects of its bite. This spider has been long known in Tuscany; but it was first brought under the attention of naturalists in 1786: its venom-bag is larger than in other kinds of the same family; and, from this sac, the deleterious fluid passes into an excretory duct which opens, after traversing the jaw, at the extremity of a moveable fang. With its bite, which is a minute puncture, the creature deposits its poison, and this is instantly absorbed into the stream of blood, exercising its baneful influences chiefly on the nervous and muscular systems. The morbid effects produced by its bite, in the human body, are similar to those which result from the bite of a tarantula. For the most part, they disappear in three or four days, and an abundant perspiration promotes their resolution. In general, this spider does not bite, except when irritated: it is most excitable in the heats of summer and autumn. Altogether, in being founded on facts and inductions, this memoir is a valuable contribution to natural history and pathology.

II. *MM. Laizer and Parieu*.—Note on the jaw of a fossil carnivorous animal, to which the name Hyénodon *leptorhynchus* has been applied. This note is an extract from the descriptive portion of a memoir on the same subject, presented by these naturalists to the Parisian Academy of Sciences, and ordered to be printed in the transactions of that illustrious association. Appended to the sketch, is a

tabular view of the principal dimensions of this jaw, with a plate containing graphic illustrations.

III. *Dr. Breschet*.—Report on a memoir of Dr. Gerdy, on the structure of the bones in the healthy state. Dr. G.'s observations are arranged under seven distinct heads—that the fibrous appearance of the "compact tissue" is owing to vascular furrows or grooves; that these grooves are longitudinal in the long bones, and radiating and divergent in certain flat bones; that the compact tissue is composed of vascular channels (*canalicules*) adhering to each other, and divided like the grooves, which terminate in them; that the sponge-like tissue of authors consists of a "canalicular," a reticular, and a cellular tissue; that the canalicular tissue imbeds vessels in a multitude of channels, nearly parallel and longitudinal in the long bones; that the reticular tissue is formed of filaments, around which the vessels unite (*s'anastomosent*) with each other; and that the cellular tissue, although much diversified in its structure, nevertheless is arranged according to definite laws. Dr. B.'s report is favourable to the author's views and conclusions.

IV. *Dr. Milne Edwards*.—Report on note of M. Manal relative to the shape of the globules of blood, in some of the mammiferous animals. From accurate experiments, this physiologist has ascertained the fact that in all the *Mammifera* hitherto examined the globules of blood are round (*circulaires*), except in the dromedary and alpaca, in whose blood they are oval (*elliptiques*), as in birds, reptiles, and fishes. The reporter solicits the attention of zoologists to the completing of this inquiry, by embracing every opportunity of investigating the form, size, and structure of the globules of the blood in all animals.

V. *M. Necker*.—Note on the mineralogical nature of the terrestrial, fluviatile, and marine shells. Mr. N. presents a tabular view of all those on which he made experiments—namely, fourteen of the terrestrial and fluviatile and sixteen of the marine, denoting the degree of activity wherewith each of them elaborates (*le spath calcaire cristallisé*) native carbonate of lime.

VI. *M. Dumortier*.—Observations on the changes of shape (*de forme*) which take place in the heads of Orangs-outans. From extensive investigation of subjects, this essayist is satisfied that the several species of Orangs which naturalists have distinguished are all referrible to one single species, observed at different ages, and exhibiting extremely different shapes of the skull and head. He makes six of these differences, and describes them with distinctness and brevity. Now, on the strength of these inductions, which shew that the shape of the head actually does undergo changes in some animals at different ages, attended with different circumstances, the physiologist may advisedly encourage his judgment, reposing on analogy, to admit the probability of the same results supervening in other animals, es-

pecially those belonging to the same class or order with the animals in which the inductive facts are observed.

VI. *Prof. Glugé*.—Observations on the inert layer (*la couche inerte*) of capillary vessels. The results of his experiments are stated in a threefold division, interspersed with explanatory remarks. *First*, that the transparent layer surrounds the current of sanguineous globules in all the capillary vessels; that the diameter of this layer varies in different tissues; and that, if it sometimes occupies the eighth part of the diameter of a vessel, it rarely, in the lungs of frogs, attains to half the diameter of a primitive fibre of cellular texture, even in vessels conveying several series of globules. *Second*, that two kinds of globules exist, in the blood of frogs, *elliptical*, inclosing a nucleus (*un noyau*), and *white spherical*, which do not appear to be globules of lymph, although identical in colour and diameter. *Third*, that the spherical globules do not belong to the lymph, because one of them has frequently and very distinctly been observed to form on the external surface of a capillary vessel, to quit that position, and to disappear in the tissue of the loose (*natatoire*) membrane, without there being any rent of its side. *Fourth*, that although the professor's observations were confined exclusively to mammiferous and amphibious animals, yet he had discovered that the inert layer also exists in fishes; and that, in them, it is still more easy to prove that the spherical globules are not separated from the stream of blood by an intervening substance. This paper forms a curious microscopical speculation in physiology.

VIII. *M. Vander Haven*.—Note on a new species of *Cryptobranchus*, from Japan. The characters which distinguish this reptile are here specified, and the author recognizes two species of the *Cryptobranchus*, while the famous fossil reptile known as the *homo diluvii testis* ought certainly to be ranked as a third, in the editor's opinion.

IX. A brief notice of *M. Macquart's* monograph on new or little known *Diptera*, published in the memoirs of the Scientific Society of Lille; it is accompanied by twenty-five illustrative plates; and this concludes the part assigned to geology.

BOTANY.—Twelve articles are entered under this division of the journal, and we submit a view of them *seriatim* to our reader's attention.

I. *M. Léveillé*.—Researches on the development of the *Uredineæ*. From his experience, this monographer concludes that the *Uredineæ* family is composed of several genera having nothing in common except their being parasites. He divides them into three sub-families—the *Æcidineæ*, *Uredineæ* and the *Ustilagineæ*—which he holds to be perfectly distinct, and adduces reasons in support of his arrangement.

II. *M. Steinhil*.—Materials for a Flora of Barbary, a fifth article. This includes the phytographical characters of *Ophrys pectus*, *Scilla fallax*, *S. autumnalis*, *S. obtusifolia*, *Tulipa celsiana*, *Ornitho-*

galum nardonensis, *Iris fugax*, with an explanatory plate beautifully coloured.

III. *M. Payen*.—Memoir on the composition of the proper texture of plants and of the woody principle. From the results of diversified experiments, this phytologist has derived the conviction, that the woody principle so universally diffused in the phanerogamous vegetables is not, as has hitherto been supposed, a simple immediate principle, but is composed of two parts chemically quite distinct and possessing a physiological nature susceptible of being definitively fixed: this article includes two interesting analytical tables exhibiting the proportions of carbon, hydrogen and oxygen in the different parts of vegetables.

IV. *M. Payen*.—New researches on the “incrustant” matter of wood. Numerous experiments on “ligneous products” enabled M. P. to isolate the incrustant substance, in a state of great purity; to ascertain its direct influence on the composition of different woods; and to discover that it characterizes the “*duramen*” and constitutes the “*sclerogens*” of plants and trees. Both of these monographs were favourably received by the academy.

V. *M. Dumas*.—Report on M. Payen’s memoir on the composition of the ligneous principle. This exhibits an analytical view of the essay, and conveys the reporter’s honourable testimony to its merits.

VI. *M. Boussingault*.—Examination of the relative value of soils, by elementary analysis. It is this writer’s object to investigate the relative value of soils, by comparing the relation which exists between the elementary matter contained in a succession of crops, and the same matter comprized in the manure consumed in producing them; in other words, to estimate by analysis the quantity of organic substances abstracted by the atmosphere in a given rotation: he is satisfied that the soil contributes a certain proportion to the development of vegetables, but that the atmosphere conduces to the same end. A curious table is appended to this paper, for the purpose of shewing the composition of various vegetables, exsiccated in a vacuum at 110° of temperature.

VIII. *M. Dumas*.—Report on M. Boussingault’s chemical researches on Vegetation. M. B.’s observations are confirmed by the report of M. Dumas and two other academicians. In summary, his doctrines are—that plants decompose carbonic acid, appropriate carbon and give out oxygen to the atmosphere, whilst animals convert the carbon anew into carbonic acid; that plants decompose water, appropriate hydrogen and emit oxygen, whilst herbivorous animals re-convert the hydrogen into water; and that certain plants appropriate azote from the atmosphere, whilst there are others which do not derive that element from the same source. The former of these facts, the reporters say, was previously known; but the two last are new to science, and possess the highest importance.

VIII. *M. Miguel*.—Experiments to determine the influence of light upon the aqueous exhalation of leaves and upon the suction performed by the stems of plants. Forty experiments were instituted by M. M. with a view to determine these intricate questions. His results are arranged under three heads. *First*, that four plants, the *Rhododendron ponticum*, *Populus tremula*, *Philadelphus coronarius* and *Gingko biloba*, absorbed somewhat more water in the dark than in the shade. *Second*, that three plants, the *Menyanthes trifoliata*, *Helianthus annuus* and *Fragaria virginiana*, absorbed an equal quantity of water in the dark and in the shade. And *third*, that in the other experiments, the plants absorbed a very considerable portion more of water in the shade than in the dark; and therefore Mr. M. feels authorized to regard this as a general rule. It is a fact worthy of remark, he adds, that for the most part the leaves retain their freshness in the dark: twenty-seven of the forty remained perfectly fresh in the dark while those in the shade were quite shrivelled. It appeared, then, that exhalation ceases sooner in the dark whilst suction continues for some time longer; and that, if leaves are deprived of the light for a certain interval, their vital activity seems to be entirely destroyed. M. Miguel's sketch abounds with ingenious observations, illustrative of vegetable physiology.

IX. *M. Brongniart*.—Report on M. Decaisne's researches on the anatomical organization of the Beet-root. These researches adduce evidence to show that in the beet-root there are three different tissues—the *general cellular parenchyma* or pulpy substance, which is colourless in the variety of beet most commonly cultivated for the extraction of sugar, but having a red or yellow colour from a transparent fluid in the other varieties: the *reticulated vessels* which, from their thick sides, have the appearance of whitish opaque veins, beneath which their clusters are discernible: and the *allongated cellular tissue* which accompanies these vessels and is placed on their outside; it is thin, delicate and transparent. It is probable that the saccharine matter of the Beet is deposited in the reticulated vessels themselves or in cells having a particular form and texture wherewith they are attended.

X. *M. Steven*.—Observations on the Taurico-caucasian pines. Six distinct species—*picea*, *nordmannia*, *orientalis*, *maritima*, *lario* and *silvestris*—are here succinctly characterized: two varieties of the last are noted.

XI. *M. Miguel*.—Note on the "préfoliation" of the Cyndee. This naturalist proposes to found a botanical character on the disposition of the leaf-buds in this family of plants.

XIX. *Dr. Walker Arnot*.—"Pugillus" of East-Indian plants. In the article bearing this title the phytological characters first assigned by Dr. A. to the *Rissoa ceylanica*, *Moonia heterophylla*, and *Sykesia kanigii*, *S. thyrsiflora*, *S. walkeri*, are transcribed.

FEBRUARY.—This comprizes eleven articles, seven of which per-

tain to the first part, ZOOLOGY; and, at the head of these stands that of

M. Johans.—Memoir on Muscardine—a distemper which infests the silkworm. This is an experimental essay wherein the naturalist specifies his means of producing the muscardine artificially, and of modifying or destroying its contagious effects. From observed facts, he draws the opinion, that the disease called *muscardine* proceeds from a plant which grows (*nait, croît et végète*) alike on the dead and living animal; that it is possible to develop this cryptogamous vegetation at will, under certain given circumstances, and that this artificial development is a secret cause of the sudden and unaccountable appearance of this scourge of the silkworm nurseries; and that there are three substances—diluted alcohol, sulphate of copper and nitrate of lead—which completely destroy the germ of the disease when communicated to the eggs of silkworms. The muscardine appears as a white efflorescence which, when examined under the microscope, exhibits a multitude of minute hollow stems filled with sporules of different kinds. M. J. regards this parasite as being nearly, if not altogether, identical with the *Botrytis bassiana*; and, if his curious inductions shall be confirmed, they will establish two very important facts, the one in physiology, the other relating to the culture of silkworms.

II. *M. Doyère.*—Note on the digestive tube of the grasshopper. This sketch is accompanied with a plate exhibiting three illustrative figures. The author arrives at conclusions which are at variance with the received opinions of naturalists; for he finds that, in this insect, there are only two hepatic vessels; that their extremities are probably not free (*flottantes*); and that the point of insertion is altogether unknown.

III. *M. Leon Dufour.*—Contribution to the natural history of the economy and metamorphoses of the Odyneri, with descriptions of some new species of this genus of insects. The wasps described as recent discoveries, in this entomological essay, are the *Odynerus reaumurii*, *O. consobrinus*, *O. cognatus*, and *O. rubicola*. In this memoir, M. Dufour has enriched his favourite science with concentrated results of more than thirty years experience: a plate, with seven figures, illustrates his agreeably diversified subject.

IV. *M. Audouin.*—Observations on the Odyneri. This article is in the form of a letter addressed by the author to his friend M. Leon Dufour, as a continuation of their entomological correspondence, with a plate and explicatory figures. His remarks bear chiefly on the habits and economy of the *Odonerus spinipes*, interspersed with notices relating to those of the *O. remiformis*, *O. reaumurii*, *O. rubicola*, *O. cognatus*, and *O. parietum*. In a copious foot-note, Mr. A. transcribes the phrase descriptive “et le développement des caractères” of the *O. spinipes*, as originally delineated by M. Wesmell in a memoir here referred to with particular approbation.

V. *M. de Blainville*.—Researches concerning the antiquity of the terrestrial Edentata (the Bruta of Blumenbach) on the surface of the globe. In this essay, the investigations of M. B. are limited to the sub-order of edentated or toothless mammiferous animals, having a long, slender, projectile tongue for seizing the insects on which they feed. He begins with a view of the history of that part of zoology which concerns them: then he treats successively of the principles of their classification; then of their actual geographical distribution; and then of their indirect or direct traces on the surface of the earth. His memoir is divided into two parts: from the first he draws four, and from the second, five distinct conclusions; and, on the results of his researches, he founds fifteen propositions, which will be appreciated by zoologists. It is an opinion of his that the *Megalonix* can hardly be considered as a fossil, although unknown in the living state, because its bones, still containing a great quantity of gelatine with their articulations, retaining the cartilages and terminal phalanges of the claws, are found among the bones of animals living at present in the places where those remains are found.

VI. *Mr. Owen* on the differences between the *Simia morio* and the *S. wurmbii*, in the period of adolescence. This is a note extracted from the proceedings of the geological society,

VII. *Account of New Publications*.—This section consists of an outline of Part I. of the nineteenth volume of the *Asiatic Researches*—twelve articles are noticed; and it would appear that the volume is almost exclusively devoted to natural history: it contains a series of memoirs on the fossils of India possessing the highest scientific importance.

BOTANY.—This part is composed of four elaborate essays, grounded on observation and experiment.

I. *MM. Vrolik and Vriess*.—Experiments on the rise of temperature of the *spadis* of a *Colocasia odora*. Results of this curious inquiry are exhibited in eighteen tables, with observations, practical details, and a graphic representation. From all the known facts relating to the subject of their investigations, the experimentalists conclude that azote, if it be not mixed with the requisite proportion of oxygen, proves as noxious to the imperfectly developed parts of plants as it does to animals. This paper opens a very interesting course of physiological research.

II. *MM. Saint Hilaire and Gerard*.—Monograph on the Primulaceæ and Lentibulariæ of meridional Brazil. These eloquent botanists distinguish the generic and specific characters of the *Pelletiera verna*, *Centunculus minimus*, *Anagallis pumila*, with four varieties, *A. alternifolia* and a variety, *A. tenella* and a variety, *A. crocea* and a variety, *Samolus valerandi*, *S. subnadicaulis*. Several distinctive and useful observations on the varieties, and a plate, enhance the importance of this phytosophical contribution.

III. *Mr. Griffith*.—Essay on the developement of the "ovules" of

the *Santalum album*, the *Loranthus* and *Viscum*. This is an extract from the *Linnean Transactions*, and has additional observations by M. Decaisne, with a plate and illustrative figures.

IV. *M. Morron*.—The Morphology of *Ascidia*. In a former number of the *ANALYST*, among the "*Outlines of Periodical Literature*," it will be seen that a complete and elegant translation of this Morphology has already appeared in one of our British journals devoted to the cultivation of natural history.

Practical Observations on the Causes and Treatment of Curvatures of the Spine; with hygienic directions for the physical culture of youth as a means of preventing the disease, an etching, and description of an apparatus for the correction of the deformity, and engravings illustrative of the cases; by Samuel Hare, *Surgeon*.—8vo., London and Leeds, 1839.

AFTER the usual preliminaries—a preface and introduction—in which he carefully delineates his objects and opportunities in the field of experience, Mr. Hare proceeds to treat of the *causes* of spinal curvature, and the principal of these he enumerates under three sections—the injudicious management of infants, children, and youth, throughout the whole period of their growth; impropriety of dress and insufficient exercise, more especially in reference to young females; and inattention to the general health and vigour of the body. These topics are severally discussed with clearness and brevity; and, though they merely repeat a "thrice-told tale," they contain many observations which medical practitioners ought most earnestly to impress on the minds of parents and the guardians of youth. Mr. H. then exhibits a sketch of the anatomy of the spine; and then, in so many successive chapters, he unfolds his views concerning spinal curvature in general, on the lateral and angular curvatures, on excurvation and incurvation of the spine, on the treatment of spinal disease, on spinal irritation, and on pulmonary consumption.

Mr. Hare combines mechanical with medical treatment, modifying his measures in conformity with the spinal state and the patient's constitution. His chief objects of treatment are, by means of the inclined plane and extension, to bring the bony structure of the body into as near a form of symmetry as may be, and to keep it in that state; by medicinal applications to improve the general health, promote the deposition of osseous matter in the bones, and assist nature in establishing the healthy function of each organ; and, by frictions and shampooing, as a substitute for exercise, or, in some cases, by hand-swings and other gymnastic practices compati-

ble with the first object of treatment, to develop the muscular structure. Mr. H. has long used a particular apparatus, with the greatest success, as his mechanical remedy for spinal curvatures; and since it appears to be constructed on rational principles, we transfer the author's description of his machine to the pages of our journal.

"This apparatus," he observes, at page 124, "consists of an inclined plane, made of inch board, two feet in breadth, and about six and a half feet in length, furnished with feet, or made to rest securely on trussels. At the upper end are three pullies inserted into a piece of oak, the latter being dove-tailed into the boards of these pullies. The two outer are about four inches, the middle one six inches in height from the board, the former ones being about eight or ten inches asunder. A similar piece of oak, having only two pullies, is attached to the lower end of the board; about one-third from the upper end of the plane, and six or eight inches from the sides, two openings are made, into which, also, pullies may be introduced. The plane is made longer than an ordinary bedstead, that the weights may hang over at each end; it may then be placed upon it with the upper end resting on the head-board, thus forming a very convenient inclination; or it may rest on trussels made for the purpose, in which case it can be readily moved from one room to another. A blanket or counterpane, four or six fold, is put on the plane, upon which the patient reclines. It is also furnished with a number of straps and weights for extension, and with compresses for pressure. A head-strap, made of soft leather, well stuffed with curled hair or cotton wool, and intended to pass under the chin and occiput, is fastened to a cord which passes over the centre pulley, at the extremity of which a weight is suspended; shoulder straps, composed of the same materials and secured in a similar manner, pass under the axillæ of each arm and over the outer pullies, having weights also attached. Similar straps and weights are also applied round the ankles, and occasionally, in the male sex, above the pelvis; these are passed over the pullies at the lower end of the plane. Pullies are also inserted in other parts of it, for the purpose of passing other cords and weights, which may be considered necessary, to be applied to any parts of the body. Shot, in bags, is the most convenient form of weight. The openings on the upper part of the plane are for the purpose of admitting a strong cord, to one end of which is attached a shoulder strap, and to the other a weight; this is very useful when the shoulder projects, as also in cases of excurvation. In instances of projection of the sternum, when the patient is said to be pigeon-breasted, a piece of padded leather, or other similarly firm substance, is used with great advantage, being made for the purpose of passing over the projecting part; and the pressure is gradually increased or diminished at the discretion of the attendant. It should be six inches broad and nine long, to which six small straps are neatly affixed, three on each side, for the purpose of being united to corresponding buckles nailed to each side of

the plane. In cases of lateral curvature where the right shoulder is much higher than the other, it is advisable to use extension upwards, only on the left side, whilst extension downwards must be used on the right: this may be effected by affixing a shoulder strap to the lower side and a wrist strap to the higher, to which are attached cords and weights passed over pulleys at the top and bottom of the apparatus. It is also very useful in cases of considerable projection of the hip or side, to have two, three, or four holes made in the plane, and pieces of wood six or eight inches long, protected by cushions of leather, introduced so as to make a lateral pressure, at the same time that extension is used. The tapes or cords to which the weights are suspended, are so adjusted that the latter may hang a few inches from the floor; and they must not on any account, in the first instance, be so heavy as to inconvenience the patient, unless the surgeon in attendance has some particular reason for such addition, but must gradually be increased from time to time, as each side may require. The patient, being laid upon the plane and the apparatus adjusted, will be operated upon by a double extension; the head and shoulders will be extended upwards, whilst the trunk will be drawn gently in an opposite direction, the weights being so equi-poised that the body is kept upon the plane, having no tendency to move either upwards or downwards: hence the objection of some authors, who think that an inclined plane is rather prejudicial, on account of the weight of the upper part of the body pressing on the lumbar vertebræ, is completely obviated, because the pressure downwards is quite counteracted by the extension upwards."

Mr. Hare's practical observations are illustrated by ten well-executed and beautiful engravings, representing the spinal column in the curved and cured states. He teaches from experience, and confirms his grounds of theory by the results of practice. We recommend his book for this reason, and for its conciseness and simplicity: it is greatly preferable to some works on the same subject, which have been forced upon public attention by an excess of unreasonable or unjustifiable pretension.

Elements of the Pathology of the Human Mind. By Thomas Mayo, M.D., F.R.S., Physician in Ordinary to His Royal Highness the Duke of Sussex; Fellow of the College of Physicians, and late Fellow of Oriel College, Oxford.

WHEN the importance to life, property, and human happiness, are all considered in relation to the disordered functions of the human mind; and our knowledge of the nature, causes, and cure of

those derangements be compared, the result will be, astonishment at the culpable torpor of science and legislation ; the latter, indeed, probably may come in for a great share of a natural and just indignation. Behold the profitless investigation to determine a fact so simple, and the devastation of his wealth in the process, when it is sought to ascertain if a certain rich man is mad ! Look again at the frightful facility with which that point is settled if the subject be a poor man without friends, and protectors ; or, if he happens to be obnoxious, merely distateful to grudging or unnatural relations. Turn we from these, to the slender, and insufficient securities demanded, ere the fanatical madman is merged in the furious wild beast, and let loose on society to delude ignorant rustics to murder, *he* ruthlessly slaying the officers of justice, and leaving no alternative to his lawful pursuers but to shoot him down as they would the tiger of which he was the moral type ! Once more witness the case in which, the cupidity of relations, *e. g.* an unnatural son, or brother ; an adulterous wife, and artful paramour, two facile physicians, and bribed domestics : or, a cruel husband with some *such* accomplices ; see to *what* these things tend, if an eccentric, or unhappy person should happen to obstinately *live on*, for no other than the malignant purpose of plaguing their thus much injured connections ! Much space might be occupied in dwelling on the social evils, and proofs could be accumulated of both the misfortune and the neglect of the subject, did space allow. Every contribution to the subject should be gratefully received, not more as a matter of morality, than as one of policy, to encourage enquiry on a subject possessing no meretricious nor extrinsic interest, nor often conferring personal advantages calculated to reward the labourer indirectly, as in subjects more or less popular ; and, for another reason, enquiry should be encouraged, if useful, from its *practical* character, it must be conducted by comparatively few individuals ; as the situations most favourable for profitable observation of the causes, symptoms, and treatment of insanity, are and may remain for a long time too scanty for this, as they are for most other purposes, of extensive usefulness to society, and the insane. This difficulty may lack weight with those who direct our attention to the poverty of the contributions to science by those who are entrusted with the care of the large institutions, affording a field of observation alleged to be sufficiently ample.

We may preface our notice of Dr. Mayo's work by the briefest reference to *modes* of considering insanity : 1st. As a disorder of the *mind* immaterially ; 2nd. As a disorder of the *mind* resulting from, or in connexion with, disease of the brain and other organs. In any case of this disease, it may happen that insanity shall appear to consist of either, or of both conditions in succession. It is not more useful to prove that insanity depends on physical causes, and in part consists of disordered actions of the brain, than to show *what* has been denied by some and doubted by more, *viz.* that it is a *moral*

disease; such terms being understood conventionally. That it is so is not impugned by the circumstance of its being attended by disordered health, nor by the *continuance* of the disease depending on functional disease, or alteration in the structure of the brain. It were useful to regard it as a purely *moral disease* in many and easily distinguishable cases; and in these, by far the most formidable, if not the most numerous, it is a subject of greater interest from the fact of its appealing to others than the physician for its prevention and cure; a theory that has the further good consequence of enlisting, if they will respond to the claims of duty, those whose province of usefulness will be thus enlarged, while many of their heretofore duties may be lightened—our legislators. For the connection between *moral* ignorance, insanity, and crime, can be well demonstrated; and a good advance in that direction is made by Dr. Mayo's work; not as revelation, nor as a novel announcement, but with clearness, and the successful prosecution of long observation and study. There is too much reason to fear that our stock of knowledge—however greatly it needs increase—for the cure of insanity depending on disease of the brain, must remain limited by the very narrow boundaries which at present circumscribe it: while the most encouraging prospects are presented to us by those whose attention has been directed to the insanity which has its origin in disturbance of the moral faculties and feelings. To this class, we observe, Dr. Mayo belongs, rather than to that which would seek in physical causes and material conditions for an extended and profound knowledge of the pathology of the human mind.

It is very inconvenient that the language of metaphysics is so little definite in proportion to the necessity for preciseness; and the poverty of our vocabulary is felt the more, in consequence of those limited resources by the pseudo-philosophers who meander in the mazes of metaphysics; to whom it is but justice to add that their legitimate confreres are occasionally more arbitrary in the use of this most uncertain language, than becomes the professed aspirants to the certainty of moral truth. All inquiries into the nature of mind in the abstract, and in connection with matter, have been embarrassed by the vary definitions which parts of the subject have received. Dr. Mayo wisely steers clear of these rocks in the ocean of truth, and succeeds in conveying his meaning clearly without the aid of new words and definitions, or materially altered arrangements of the subject and its accidents.

"In regard, then, to the question, What is insanity? I answer that it is a morbid state to which those persons are subject in whom the power of volition is feeble, when they are placed under the influence of certain mental and physical causes, which I shall next endeavour to enumerate."—p. 16.

Guided by the principle involved in this definition, he has offered many highly valuable suggestions for self-government, as preventive of insanity; which in some temperaments would seem to be the ine-

vitale result of feeble volition, and deficiency of hopefulness ; which two conditions are *efficient* causes of insanity under any circumstances. *Selfishness*, for the under-stated reasons, powerfully affects the being ; and, *conjointly* with the preceding conditions, can hardly fail to produce this painful visitation. "I mean, then, to express by selfishness that state of mind which occasions us to find our enjoyment in any given line of conduct as serviceable to ourselves and not as to others. Now this is a state highly predisponent to insanity, since it gives ample food to a noxious principle which we have already noticed, namely, the tendency to *regret* and *disappointment*, and that on principles which will readily be admitted. The wishes of a selfish man, to be a source of gratification to him, require the achievement of some definite object ; and this, of course, he cannot always secure."—p. 30.

"Virtuous principles should be strengthened ; vicious tendencies should be supplanted in favour of the cognate virtuous tendencies. For a just theory of morals will suggest to us the fact that our vices spring from impulses, to which education may ordinarily give a very different character.

"The importance of the first suggestion, namely, the erecting principles of action, is extreme in relation to the insantly predisposed. For such persons are, as we have observed, ordinarily indecisive and regretful. But a general principle on any given subject supplies steadiness of purpose to the former, and controls the re-actions of the latter by summoning to the aid of each party the satisfaction which men always feel in being able to assign a reason for their conduct. Even the bad, if their vices have been erected into principles, are *so far* less liable to insanity than men of virtuous tendencies, but of casual and uncertain impulses. A high and enlightened religious feeling is, I believe, the best safeguard of the human mind against the invasion of this complaint.

"It strengthens the tendency to hope, and supersedes those anxious regrets which we have described as unsettling the influence of the will. The connection between religious associations and insanity is not very justly appreciated. The apprehension of mischievous excitement, as arising from them, applies only to the actual presence of insanity ; and is then only so far true as the disease may happen to have been occasioned by wild and ill-regulated views on the subject. Religion, as dealing with the most important considerations, must, like any other very interesting subject of our hopes and fears, be liable to disturb the mind. But religion has rarely disturbed that mind before which it has been brought rightly and wisely in early life, and during the process of education. Some doctrines imputed to our faith by teachers whom I must consider as ill-advised, have certainly a most dangerous tendency in this respect. I allude here particularly to the doctrines of election and sensible regeneration. If the tree be known by its fruit, assuredly those doctrines cannot have flowed from the Divine Author to whom they are rashly imputed."—p. 85-6.

Mayo has a most valuable suggestion for supplying some intermediate place of seclusion, superseding the prison or the school, the penitentiary and the madhouse. Cases are continually occurring in which the natural or acquired *brutality* (unquestionably a form of insanity) demands the seclusion of the being for the protection of the public, and the correction of himself; whose acts made him amenable to the laws, but in whom the physician detects *mental disease*, yet not to the extent which the law receives as evidencing the moral and legal irresponsibility of the confirmed maniac; which, however, he eventually becomes, although, in many instances, were there proper provision for his control, he would be found curable by some such means as are suggested by Dr. Mayo.

To the statist, the philanthropist, the physician, and the legislator, this book will be useful; and greatly should we rejoice if this commendation contribute at all to its circulation.

Who has not painfully pondered and speculated on the memorable words of one, whose stupendous intellect was known too frequently to be all but prostrate before well-grounded *fears* of mental alienation. "Disorders of intellect," answered Imlac, "happen much more often than superficial observers will easily believe. Perhaps, if we speak with rigorous exactness, no human mind is in its right state. There is no man whose imagination does not sometimes predominate over his reason, who can regulate his attention wholly by his *will*, and whose ideas will come and go at his command. No man will be found in whose mind airy notions do not sometimes tyrannise, and force him to hope or fear beyond the limits of sober probability. All power of fancy over reason is a degree of insanity; but while this power is such as we can control and repress, it is not visible to others, nor considered as any depravation of the mental faculties: it is not pronounced madness but when it becomes ungovernable, and apparently influences speech or action.*" Who, on instituting a severe and careful inspection, has not discerned the foundation of those harrassing apprehensions: or, in reviewing his own important acts, reverted to examples of inconsistency and fallacious reasoning, which, judged of in another, would have prompted that sentence which, when fulminated by the law, consigns the unhappy agent to perpetual seclusion; in which it is often the case that the chances of restoration by fitting moral discipline (with such cases, the only cure) are reduced to the minimum of probability.

Such enquiries and reflections will be usefully aided by Dr. Mayo's book, and its interest is, therefore, not confined to classes or professions. It is an useful work of moral philosophy adapted to all; and literally instructs us, *how to avoid going mad!*

* Johnson's *Rasselas*.

A Practical Treatise on the Human Teeth, showing the causes of their destruction and the means of their preservation. By William Robertson. Second Edition, with plates. London: Hayward & Moore. 1839.

WHATEVER may be said in favour of scientific research, as tending to moral culture, the real and substantial object of scientific enquiry is utility ; in the application to our individual and daily wants rests the value and excellence of every discovery. Utility, therefore, becomes the *experimentum crucis* of every new proposition and theory in facts, and necessarily involves the truth in part or in the whole, according to the amount of utility. The work before us is one of that character which strikingly illustrates these remarks ; it can of itself possess no claim whatever to the attention of the public, but becomes, like the generality of such treatises, a mere advertisement, unless it contain truth and utility. Either it is true, and, if so, of the greatest worth, or, like all its predecessors, only partially true and very partially useful.

With such obvious truisms to actuate us, we have given to Mr. Robertson's treatise a most careful examination in its relations, facts, and consequences, and can unhesitatingly admit the truth of his theory, as corroborated both by external and internal evidence: we congratulate ourselves and the public, not so much upon the discovery of the true cause of caries of the teeth, but that this discovery indicates a sure plan, not only of cure, but of the prevention of caries, which no other theory has yet accomplished. The names of Hunter, Bell, and Fox, not to mention a host of minor theorists, have all tended to establish and confirm the old opinions of inflammation of the bone, or the internal membrane of the teeth, or of the external surface of the bone contiguous with the enamel. The various theories, doubtless, possess much plausible ingenuity, but are not the less wrong ; and it is an unhappy circumstance that, being wrong, their precedence has given, in the public mind, a vantage ground which is highly prejudicial to truth, and to the interest of mankind. Until the promulgation of Mr. Robertson's opinions, no one ever thought of saving their teeth until they were past all remedy, neglected at the only period when a remedial process was available, because misled by the supposed inutility of any preventive means. Generations after generations have languished under an insufferable pain, with frequent impaired health ; and at last have been obliged to submit, in spite of infallible succedaneums, to the excruciating torture of extraction : thus leaving the miserable sufferer, most frequently the young and the fair, with the ugliest defect and deformity of age. In twenty millions of people in this country, how many are there, on the average, that have sound teeth ? Not one in a thousand. In fact, the disease is so universal

that it is looked upon as a sort of original sin, and meets with as little compassion.

Mr. Robertson's theory is totally opposed to the theories of Fox and Bell, but what is better, his theory is fraught with incalculable good in its results: we earnestly call upon parents, to whom their children's health and happiness is dear, to procure and attentively consider this admirable work of Mr. Robertson, which we at once recognize as possessing, in the highest degree, the essential mark of truth, that is, of utility. We are glad to see that a second edition has already appeared.

Contrary to our general manner, we have made no extracts from the work, nor have we entered into an explanation of Mr. Robertson's theory. This we purposely avoided, convinced that when prejudice is so active in favour of old errors, a new theory should not be cut up into passages, to be objected to in particulars, but left whole and complete, with all its force of demonstration and argument to support it.

OUTLINES OF PERIODICAL LITERATURE, RELATING TO THE NATURAL SCIENCES & PHILOSOPHY.

The London and Edinburgh Philosophical Magazine and Journal of Science; conducted by Sir David Brewster, F.R.S. Richard Taylor, F.G.S. and Richard Phillips, F.G.S. 8vo, London, 1839.

JULY, MDCCLXXXIX.—This month's publication is opened with two short articles—Prof. Miller's note on the velocity of sound, and Mr. Richardson's notices in analytical chemistry, being an analysis of the sesquichloride of carbon, and an account of the employment of chromate of lead in the analysis of organic substances. Then comes a continuation of Mr. Ivory's Bakerian lecture; his subject, the theory of the astronomical refractions. Another portion of Col. Wright's meteorological observations in Colombia, is exhibited under a tabular arrangement; and these are followed by Dr. Bowring's description of the boracci and lagoons in Tuscany; by Prof. Forbes' farther communication on the colours of the atmosphere; by Mr. Mullin's observations on an improved construction of the *voltæic* sustaining battery; by Prof. Thomson's new and curious geometrical proposition, and by Dr. Thomson's chemistry of *pyrosylvic* spirit and its compounds. Dr. Schweitzer's analysis of sea-water, as it exists in the English Channel near Bristol, clearly shows that the virtues of this are greatly inferior in salutary energy to those

of the mineral waters at Ashby-de-la-Zouch and other medicinal springs. The three last original contributions are, Mr. Morgan's on the use of the galvanic battery in blasting: Mr. Fownes' on the equivalent of carbon; and Prof. Kersten's on the leather-like substance found upon a meadow, with Prof. Ehrenberg's postscript announcing its composition. Last of all stand two bibliographical notices, proceedings of the Linnæan Society, intelligence, miscellanies, and meteorological observations.

SUPPLEMENT.—This comprizes an important essay of Mr. Henwood's on the expansive action of steam in pumping engines; proceedings of the royal, geological, astronomical, Cambridge philosophical, and American philosophical societies; intelligence and miscellanies, with title, table of contents, and index to the volume.

AUGUST.—The first article in this number is Mr. Grove's communication on the inaction of amalgamated zinc in acidulated water; the second is Mr. Halliwell's notice of his discovery of a lost manuscript of the seventh book of the Mathematical Collections of Alexandrianus Pappus, who flourished towards the end of the fourth century; and the third is Mr. Richardson's note of an analysis of colophonite. Dr. Thomson, of Glasgow, then comes with an additional portion of his valuable essay on pyroxylic spirit and its compounds: then follows another section of Col. Wright's meteorological observations in Colombia: then a portion of Mr. Ivory's Bakerian lecture on the theory of astronomical refractions: and then Mr. Weaver's observations on the older stratified rocks of North Devon, with correlative remarks concerning transition or protozoic regions in general—a sketch involving questions both curious and important: and then Mr. Graves' ingenious communication on the functional symmetry exhibited in the notation of certain geometrical porisms when they are stated merely with reference to the arrangement of points: it is illustrated with diagrams. Dr. Schenbein contributes a notice, the object of which is to show the possibility of constructing voltaic arrangements which, as to their mode of exciting current electricity, must be considered, in some respects at least, as the very reverse of what the ordinary hydro-electric circles are. In a report on the progress of the geological map of Belgium, M. Dumont embodies observations on the equivalents of the Cambrian and Silurian systems in Belgium; this practical article is followed by one from Mr. Goddard on the polarization of light by living animals: nine articles of intelligence and miscellanies stand next in order, and the number concludes with the meteorological observations and table.

SEPTEMBER.—Here, from the pen of Dr. Jacobi, you have a communication on the method of producing copies of engraved copper-plates by voltaic action; on the supply of mixed gases for Drummond's light by electrolysis; on the application of electro-magnetism as a motive power in navigation; and on electro-magnetic currents. Mr. Lubbock gives a paper on the general solution of algebraical equations; and he is followed by Col. Wright with an additional portion of his Colombian meteorological observations. The next article merits the highest consideration, in that it consists of instructions for the scientific expedition to the Antarctic regions: it is prepared by the president and council of the Royal Society, and the instructions are arranged under three heads—physics and meteorology, directions for making meteo-

rological observations, and an account of the magnetical instruments employed, and the mode of observations to be adopted in the magnetical observatories about to be established by the government. The only review for this month is that of Halliwell's *Rara Mathematica*, or a collection of treatises on the mathematics, and subjects connected with them, from ancient inedited manuscripts. The miscellaneous articles, with intelligence and the meteorological observations, finish the September publication.

The Phrenological Journal and Magazine of Moral Science, published quarterly: edited by Hewett Cotterell Watson, F.L.S. 8vo., London and Edinburgh, 1839.

VOL. XII, No. LX, JULY, 1839.—This Journal is methodically distributed into a fivefold arrangement—miscellaneous papers, cases and facts, notices of books, short articles and intelligence. Seven papers compose the first division, and the "leader" consists of remarks and suggestions explanatory of the general purposes of a projected phrenological association. Then follow in succession observations on the sense of resistance, on the social effects of acquisitiveness, on the organs of concentrativeness and firmness, on organometry, with the description and figure of an instrument and a section of the brain, and on the function of tune, with a correspondence relative to Mr. Watson's phrenological lectures. The cases and facts include a morbid excitement of destructiveness, a large development of eventuality with corresponding talent, a peculiar torpidity of conscientiousness, the effect on offspring from mental impressions in the mother, a visit to Glasgow Bridewell, the developements of fourteen ancient busts, and the busts in the exhibition of the Royal Academy. Four notices of books, eleven short articles and eighteen pieces of intelligence, complete the sixtieth quarterly publication of this extraordinary scientific journal.

The Naturalist, illustrative of the Animal, Vegetable, and Mineral Kingdoms, with engravings; edited by Neville Wood, Esquire; royal 8vo., London, 1838.

No. XXXIV, JULY.—Mr. Edwin Lees invites attention to this month's *Naturalist* with the pleasantries of an oracular epistle on local occurrences in natural history; then you have an amusing tale or two from Mr. Russell, with the title of ornithological selections and criticisms; and then you arrive at a natural history of the Blood-hound, and its African and Spanish varieties, by a lover of nature, who says his say somewhat cleverly, after the gossiping manner of the man of dogs and horses, who styles himself Nimrod, in the *Sporting Magazine*. In contrast with these specimens of fine penmanship, are good analytical sketches of European ornithology, taken from the *ANALYST*, to the extent of about six pages. Mr. Hall then discusses the habits and peculiarities of ten C's among the British plants, and retails, with an entertaining air of originality, the derivations of their Latin names. For a

July correspondence, you find two epistles, one very short and the other rather long, but enlivened with a malediction on "all village gunners who wantonly slay the most elegant creatures of the almighty world." On reaching the "Naturalist's Literary Portrait Gallery," you are furnished with a very brief translated character of Prof. Arago, instead of a biographical sketch: hence you are led to regard the professor as a wonderfully funny philosopher: his portrait is a black picture, with "hair curling, and a fine meridional head, possessing a power of will and reflection in the muscular contraction of its temples." The proceedings of natural-history societies are those of the zoological, geological, Linnæan, Hull literary and philosophical, Dublin royal zoological, and the Warrington phrenological. This number of the *Naturalist* finishes with four brief extracts from foreign publications; five reviews of new works; literary intelligence, selected poetry, and miscellanies.

NO. XXXV, AUGUST.—For this once, the *Naturalist* opens with a very odorous article from the pen of a "botanical looker-on," who expatiates with exceeding sweetness on the Rose and its loveliness. Next on the list stands a sketch of European ornithology; and in copying this from the *AWALT* Mr. Neville Wood has recourse to another of his selfish tricks: he has no authority for prefixing Dr. Palmer's name to the article, and the effect of this practice is to create a false representation. Article the third is copied from the *Dublin Medical Press* of last June, and it bears the title, "Habits of the Fitchet Weasel or Polecat, by a Student of Nature," in whose head, a phrenologist might say, the organs x and $xxxiii$ are pleasantly predominant—prolixity and wordiness diminish its merits. Mr. Levison furnishes an additional portion of his comparative phrenology; and Mr. Hall does the same with his composition on British plants and their Latin names. The correspondence is occupied with "random remarks on natural history, by Mr. R. Pigott, a junior entomologist," and a commendatory certificate in favour of the *Naturalist*, by "an admirer." Then, in due form, come the proceedings of natural-history societies, the reviews of new publications, the literary intelligence, selected poetry, and six little miscellanies.

NO. XXXVI, SEPTEMBER.—Mr. Hamilton contributes a valuable article to this month's publication, in the shape of observations on the practicability and advantages of the culture of wheat within the tropics, and more especially in the British West-Indian settlements: this subject merits the attention of intertropical agriculturists. After him comes Mr. Wright with a concise but elegant outline of the comparative structure of the organs of locomotion in radiated animals; and this writer is followed by Mr. Hall with a fresh portion of his essay on British plants and their Latin names. Mr. Peter Rylands then gives a glance at the habits of the Adepbaga, and his glance sparkles with the brightness of an eye enamoured of its object. Another sketch of European ornithology is furnished by Mr. N. Wood, and Prof. Meyen presents contributions towards a more accurate knowledge of the *Spongilla lacustris*, the fresh-water sponge, in an English translation. On this occasion, the botanical looker-out is poetical and pleasant in his exclusive speculations; and, at the same time, the editor's complaisant acquaintance, Mr. Rylands, takes all the "correspondence" into his own management. For the rest, you have the brief proceedings of three societies; three little extracts relating to zoology, from foreign publications; two reviews, a notice

of Mr. Turley's "First Lines of Education; selected poetry; and the chapter of miscellanies, which is unusually miscellaneous and edifying.

The Magazine of Natural History, and Journal of Zoology, Botany, Mineralogy, Geology, and Meteorology, conducted by Edward Charlesworth, F.G.S. 8vo, London, 1839.

No. XXXI, JULY, 1839.—Mr. Lyell introduces this month's publication with an admirable communication on the relative ages of the tertiary deposits commonly called *crag* in the counties of Norfolk and Suffolk: a list of one hundred and ten fossils, from the *Norwich crag*, is appended to this paper, and the neighbourhood of that city and of Southwold is given for their locality. Another portion of Dr. Bachman's monograph of the genus *Sciurus*, with descriptions of new species and their varieties, contains the doctor's characters of four species, with their habits and geographical distribution. Mr. Ogilby continues his observations on the history and classification of the Marsupial quadrupeds of New Holland, and his valuable article exhibits a very natural and philosophical arrangement of the Marsupial tribe. With an additional section of his illustrated zoological notices, Mr. Charlesworth describes and represents the fossilized lower jaw of a *Mammoth* from the Dogger Bank, the tooth of an *Otodus* from the London clay, and a silicified *Zoophyte* from the Kentish chalk: his figures are bold and beautiful. Dr. Drummond's observations on *Fossil Infusoria* found in Ireland, make known the important discovery, ascertained by microscopical investigation, that Mr. William Thompson has been the first to detect fossil infusorial remains in the British islands: his specimens are figured with great distinctness. In a letter, which is given both in French and English, Prof. Agassiz vindicates his motives in producing a cheap French version of Sowerby's *Mineral Conchology of Great Britain*; and, in an editorial note, there is sufficient evidence produced to show that the divine maxim—*Do as you would be done by*—has any thing but a conspicuous appearance in the conduct of this distinguished foreign naturalist. The *July* terminates with two brief reviews, and Mr. Newman's descriptions of new *Papillia*, for a short communication.

No. XXXII, AUGUST.—Mr. Hogg here proceeds with his essay on the classifications of the amphibious tribes; and this is followed by a continuation of Dr. Bachman's elaborate monograph of the genus *Sciurus*, with descriptions of new species and their varieties. Dr. Clarke gives illustrations of the geology of the south-east coast of Dorsetshire; and, after it, come two reviews of expeditions into southern and interior Africa, the observations being confined to subjects of natural history. With an editorial note, a letter from Mr. Sowerby on the French edition of his *Mineral Conchology*, and two short communications, bring this month's publication to a conclusion.

No. XXXIII, SEPTEMBER.—This commences with a large extract, from the proceedings of the Geological Society, of Prof. Owen's observations on the relation existing between the Argonaut-shell and its cephalopodous inhabitant: he regards the facts already ascertained to be decisive in proof that the cephalopod of the argonaut is the true fabrication of its shell. For a second article, you find another series of Mr. Clarke's illustrations of the

geology of the south-east of Dorsetshire, with ten explanatory figures. Mr. Garner then continues his essay on the anatomy of the Lamellibranchiate conchiferous animals: then Mr. S. V. Wood announces the discovery of fossil quadrumanous remains near Woodbridge in Suffolk; and then Prof. Owen describes Mr. W.'s newly discovered fossil, which is represented in three distinctly sketched wood-cuts: it is a tooth of one of the *Macacidae*, with part of the lower jaw. Two more of Mr. Charlesworth's illustrated Zoological notices are next given: they relate to the discovery of a portion of an *Opposum's* jaw in the London clay near Woodbridge, and to some fossil teeth of the genus *Lamna*, from the same deposit: this is an interesting paper and has eight illustrations of the writer's valuable remarks. Mr. Morris communicates the first portion of a systematic catalogue of the Fossil Plants of Great Britain: his list includes the distinctive characters of twenty genera and forty-four species of the cryptogamous tribe. Mr. M. might derive a reasonable share of gratification from an attentive survey of the Fossil Vegetables represented in the beautifully graphic plates with which the late Mr. Mammatt's *Geological Facts* are so richly and usefully illustrated. A curious note of Mr. Shuckard's on the pensile nests of the British wasps, is succeeded by Mr. S. V. Wood's article on the Fossil shells of the crag, intended as an addition to the British tertiary fossils: he ranges them all as *Bullæ* and designates eleven species, one of which only is from mammaliferous crag and the rest from the coralline. Among the short communications, which are seven in number, is a note stating that Prof. Mosander of Stockholm has discovered, in the ore called cerite, a new metal to which he has given the name of *Lanthanum*; its colour is grey, and it appears to be soft and ductile; it constitutes the fifty-fifth elementary body.

Annals of Natural History; or Magazine of Zoology, Botany, and Geology; conducted by Sir W. Jardine, Bart., P. J. Selby, Esq., Dr. Johnston, Sir W. J. Hooker, and Richard Taylor, F.L.S. 8vo., London, 1839, with graphic illustrations.

NO. XVIII, JULY, MDCCCXXXIX.—Under the title *Miscellaneous Zoologica*, Dr. Johnston describes three species of the British *Nereides*, and a plate which will form part of the supplement to the present volume. Capt. Cook then resumes his remarks on the *Pinus* and *Abies*, with notes on a new species; and, in a supplementary paper on the synonymy of *Passandra*, by Mr. Newman, three species are characterized. The next is a very curious and interesting article on the morphology of the *Ascidia* of plants, from the pen of Prof. Morren: he concludes, from a legitimate induction, that the various *ascidia* have a similar organic composition, and that they all are metamorphoses of the leaf and particularly of the blade of this organ. In a continuation of his specimen of the New Zealand botany, Mr. A. Cunningham treats of nineteen additional species, distinguishing their characters and habitats: his list now includes six hundred articles. Prof. Kersten relates his experiments on a leather-like substance found in a meadow; and, from these, he derives the opinion that this substance results from an aggregation of leaves

from which the green colouring matter, the extractive matter, and also the organic matters, have entirely disappeared: in a postscript to this account, Prof. Ehrenberg has ascertained, from a microscopic examination, that this meadow-leather consists most distinctly of *Conferva capollaris*, *C. punctalis*, and *Oscillatoria limosa*, forming a compact felt bleached by the sun on the upper surface, and including some tree-leaves and blades of grass, with a number of silicious *infusoria* lying scattered among the conferves. From collections sent to Prof. Hooker from Van Dieman's Land, by Messrs. Lawrence and Gunn, an essay towards a flora of that country has been contributed by Mr. Berkeley: in this he characterizes twenty-seven Fungi and one of the Algæ, illustrating his descriptions with three pictorial figures. For information respecting botanical travellers, there is an entertaining account of Mr. Gardner's journeys in Brazil, and his observations on the plants of that immense and little-explored region. With two bibliographical notices, the proceedings of the zoological, the Tweedside physical and antiquarian, and the Edinburgh botanical societies, five miscellanies, and the meteorological observations and table, the *July Annals* are completed.

No. xix, AUGUST.—Mr. Selby introduces a continuation of his *Fawna* of the Twizell estate, with some general observations, and an account of a sweet device, alike ingenious and successful, for capturing the lepidopterous night-fliers: his present lists include 640 species of the coleopterous, and 360 of the lepidopterous insects. He is followed by Mr. Berkeley with descriptions of 116 exotic fungi, and a plate exhibiting four illustrations. In additional remarks on the generic distribution of the British Hydromyridæ, Mr. Haldiday treats of *Hydrellia* with three sub-genera, and *Ephydra* with eleven sub-genera, characterizing fifteen species under the former, and thirty-five of the former genus of dipterous insects. You then have Prof. Morren's further remarks on the morphology of the *Ascidia* of plants; Mr. Walker's descriptions of British Chalcidites, of which eleven species and thirteen varieties are enumerated; an account of two genera of the Passifloræ, by Mr. Harvey, with two plates and twenty-five representative figures; a list of fossil Mammifera from the basin of the Rio das Velhas, by Dr. Lund, with an extract of some of the distinguishing characters; and, last of all, Mr. Bentham gives an enumeration of plants collected by Mr. Schomburgk in British Guiana. You then pass to

No. xx, which is supplementary, and opens with an addition to Mr. Schomburgk's list, carrying it on to the one hundred and thirty-second species. A communication from Capt. DuCane, on the metamorphoses of the Crustacea, is illustrated by a plate with six very distinct figures; and, from Mr. Dickie's remarks on the Fumarianæ, you pass on to a bibliographical notice of Prof. Jones' *General Outline of the Animal Kingdom*. The proceedings of the zoological and Linnæan societies are copious and interesting: the miscellanies are seven in number, short but valuable; and, after them, the meteorological tables and observations complete the third volume of this highly meritorious scientific journal.

No. xxi.—Mr. Gray ushers in the September Annals very interestingly with descriptions of some Mammalia discovered in Cuba, and an account of their habits. The animals, here characterized, are bats, and five out of the eight species are new: there is a plate with four figures in illustration. A first extract from Mr. Tweedie's rough notes of a journey across the Pampas

of Buenos Ayres to Tucumán, in 1835: this records a variety of important botanical and zoological remarks, and these are followed by Mr. Macleay's observations on Trilobites, founded on a comparison of their structure with that of living Crustacea. Next in order, stands another portion of Mr. A. Cunningham's specimen of the botany of the New Zealand islands; and, in this, ten species and their habitates are described. There is then a note of Dr. Wagner's on the *Macroscelides rosei* or smoothed insect-eating mouse: then the characters of two new species—*Pancratium tortuosum* and *P. trim-thum*—of amaryllidean plants: and then a fresh number of Mr. Walker's descriptions of British Chalcidites, comprizing nine species and one variety. A valuable paper makes the last of the original communications: it is intitled, instructions relative to botany and vegetable physiology, for the scientific expedition to the antarctic regions, prepared by the president and council of the Royal Society: these instructions will greatly facilitate researches for the promotion of natural history. Six bibliographical notices, mostly brief ones, bring you to the proceedings of learned societies—the Zoological and Linnæan—those of the former being reported at great length, in conformity with their importance. Four miscellanies bring you to the meteorological observations and tables, with which the September closes.

NOTICES OF RECENT GERMAN WORKS.

Heidelberger Jahrbücher der Literatur unter Mitwirkung der vier Facultäten redigirt von Geh. Rath. F. C. Schlosser, Geh. Hofrath Müncke und Hofrath Chr. Bähr. Erstes Heft. Januar, 1839. (The Heidelberg Annual of Literature, under the direction of the four Faculties, &c.)

THIS periodical contains reviews upon the following works—George Sand, by the Count Theobald de Walsh, &c.; the Unpublished Writings of Dr. Albert Reuggers, formerly minister of the Helvetic Republic; Remembrances of Spain, &c.; Duke Albert the Bold, ancestor of the Royal House of Saxony, 1838, &c.; Manual of the French Civil Law, by Zacharia, 1837; Writings of Fredrick of Ghent, a memorial; Representation of the Present State of Agriculture in Great Britain, 2 vols. 1838. The next division of this review includes works on physics (*Physikalische Literatur*)—Elements of Experimental Physics and of Meteorology, 1837, by M. Pouillet; report of the Proceedings of the Naturalist Society of Basle, from August, 1836, to July, 1838; the Influence of the Seasons on the Mortality of the several ages in Belgium, by A. Quetelet; Experiments on the Mean Density of the Earth by means of the Drehwage, by F. Reich, 1838; Blasedow and his Son, a serio-comic romance, by Kail Gutzkow, 1838; an Essay on Social Physics, or on Man and the development of his faculties, by A. Quetelet, 1838. This review closes with a notice of the classic literature of the year;

Pausanias' description of Greece, by Schubart and Walz; Homeri Odyssea, with annotations by Censius; Greek anthology, by Bachius; Oratores Attici, by Baiterus; ἡ ξενωφώντις καὶ συζήματα Xenophonitis quæ exstant, by Schneider, &c.

Neue Jahrbücher für Philologie und Paedagogik oder Kritische Bibliothek für das Schul und Unterrichtsweisen in Verbindung mit einem Vereine von Gelehrten, herausgegeben, von Dr. Gottfried Seebode, M. Johann, Christian Jahn, und Prof. Reinhold Klotz. (New Annual for Philology and Pedagogical Science, or critical library for school affairs and teaching, published in connection with an union of learned men, by Dr. G. Seebode, &c.)

THE whole of the papers are confined to new editions of the classics, the examination of school affairs, and modes of teaching, &c.

Annalen der Pharmacie. Band xxxix, Heft 1. Herausgegeben unter mitwirkung der H. H. Dumas, Paris, Graham, London, von Friedrich Wöhler und Justus Liebig. (Annals of Pharmacie, vol. xxix, part 1st; published (with the assistance of H. H. Dumas, Paris, and Graham, London), by Fredrick Wöhler and Justus Liebig. January, Heidelberg, 1839.

AMONG the most important papers are, an examination of the Constitution of Oxalic Acid, Nitrous Acid, Phosphoric Acid, and Vitriolic Acid Salts, &c., by Dr. Graham; on a new combination of Cyanigine with iron by Pelouze; also on an examination of fatty bodies, by Pelouze; on the proportion of animal and earthy matter in the different bones of the human body, by G. O. Rees, &c.

Annalen der Physik und Chemie, Herausgegeben zu Berlin von J. G. Poggendorff. Band xxxvi, Strick 1, 1839. (Annals of Physics and Chemistry, published at Berlin by J. G. Poggendorff. Vol. 46, Part 1st, 1839.)

THIS most admirable publication contains original papers on the following subjects—eleventh series of experimental inquiries on electricity, by Michal Faraday; a plan of experiments, by the help of which the theory of emissions and undulations can be placed upon the most positive proof, by Arago; method for the examination of steel, wrought and cast-iron, by Berzellus; contributions to organic chemistry, by C. Löwigs; on the elasticity of some condensed gasses, by R. Bunsen; upon a new magnetic-electrometer, by Nieff; observations on the electrical Polarization of solid and fluid conductors, by C. F. Schönbein. The two latest numbers of this periodical contain important communications from the most distinguished philosophers of Germany, France, and England; the twelfth series of experiments on electricity, by Faraday; contributions on the electro-chemical phenomenon (Merkwürdigkeiten) of the nitrous acid solution of silver, by G. H. Fechner; on electro-magnetism, as a moving power, by Voisselmann; new ob-

servations on the voltaic polarization of solid and fluid conductors by Schönbein. Part seventh contains similar valuable papers on the attraction of the electro-magnate, by Jacobi and Lenz; on the chymical operation of a weak electrical stream long continued, by G. Bird; on the electrical polarization of metals, by Henrici; observations upon coloured glass, by Splittergerber; on some of the changes of the electro-magnetic condition of the surface of zinc, in contact with an alkaline fluid under the influence of the electrical stream, by P. S. Munck af Rosenschöld.

Deutsche Vierteljahrs Schrift,—Januar-März, 1839. (The German Quarterly Magazine,—January to March, 1839.)

THIS very ably conducted periodical, which consists of no less than 325 closely-printed pages, contains a series of articles of the most interesting, instructive, and diversified kind. The principal subjects are, on the spirit and character of the German periodicals; on German influence in the United States of America; the intellectual life and scientific impulse in Italy; on the elevation of the Bogota, by Humboldt; consolation for the faint-hearted; French commerce with foreign nations, particularly with Germany; on the deficiency of fuel (wood, Holznoth), &c.

Jahrbücher für wissenschaftliche Kritik, Herausgegeben von der Societät für wissenschaftliche Kritik zu Berlin. Jan., Feb., und März, 1839. (Annual for Scientific Criticism, published for the Society of Scientific Criticism, Berlin, &c.)

The three numbers included in this notice fully maintain the high character of the work. The table of contents presents many and various subjects of the highest excellence. Among the principal are, on the origin of Episcopacy in the Christian Church, &c., by Banes; History of the new philosophy of Ludwig Feuerbach; slavery and the slave trade, by Gasparin; Claudii Ptolemæi Geographiæ, libri octo; Wilberg, national and political economy, by Riedel, mathematics as a system considered, by Dr. H. Burhenne; literary travel in Italy, to discover the source of the Bohemian and Moravian history, by Franz Palacky; history of the lost systems of philosophy in Germany, from Kant to Hegel; Becker's history of the world; the perfect organization of the Infusoria, a look into the deep organic life of nature, by Ehrenberg; Goethe's Iphigenie; Hegel's lectures on Æsthetics, &c.

ERRATA.—Page 5, and throughout the paper, *for* ratio of convictions to acquittals, *read* ratio of convictions to commitments. *Ib.* In the last line of column sixth, *for* .7702, *read* .7267. Page 8, line 25, *for* 77 *read* 72, and *for* ten *read* five.

DIVI BOTANICI;

OR SKETCHES OF BOTANISTS WHOSE MERITS ARE COMMEMORATED IN
THE APPELLATIONS OF PLANTS.

ARTICLE IV.

PHYTOLOGISTS have occasionally encouraged an amiable fondness for retracing the origin of their science to the remotest times: nevertheless, the beginning of its primitive advances remain unchronicled in the records of intellectual enterprise. Moreover, although, from the youth of his being, man would necessarily be induced to draw many elements of his subsistence from the productions of vegetable nature, yet hitherto no evidence has been adduced to show that other than a mere instinctive acquaintance with the qualities of esculent or medicinal plants was possessed by the dispersed inhabitants of the world, subsequently to those tremendous convulsions of its structure which wrought, from the wrecks of herbs and shrubs and trees, the "carboniferous formations" on the globe, where they are now so extensively detected by the geologist, and employed in the most extraordinary operations of Science and the Arts. When the remains of ancient Egyptian sculpture, with their hieroglyphic characters, are methodically examined, they furnish proofs, in the figures of flowers, that certain vegetables had been immemorially appropriated by the national priesthood as determinate mystical symbols—perhaps as objects of superstitious veneration, like the wild Celtic worship of the oak and its parasitic mistletoe.¹ Among these alle-

¹ *Viscum album* is a remarkable parasitic evergreen, never known to grow upon the ground. Generally, in this country, the plant is found on the ash, hazel, lime, willow, elm, white beam, hawthorn, service, maple, willow, quicken, elm, crab, and pear; most frequently, on the apple-tree; rarely, on the oak. The mistletoe has yellowish foliage: its berries are milk-white, and so viscous as to serve for bird-lime. When these fall, they adhere to the branches of the tree on which the plant vegetates, and strike root into its bark, or are carried to other trees by birds. The Druids, who were the ancient Celtic mystagogues, entertained an exceedingly superstitious veneration for the Mistletoe of the Oak, assigning it an awful precedency in their political and religious observances. They also professed a high opinion of its medicinal virtues, esteeming it a *Pharusium* or remedy for all diseases. For these reasons, it was gathered with the most pompous ceremonies and solemn invocations to the All-Healing, All-Saving Power to give it beneficial efficacy in the application. From an amusing chorographer and anti-

gorical plants, the lotos,² colocasia,³ persea,⁴ papyrus,⁵ squill,⁶ and banana,⁷ were consecrated as the representatives of the most sublime

quary, we derive this information respecting the druidic rite of consecrating *Uchelvar* the lofty grower, the misseltoe. "In such gloomy shadows as they most usually, for contemplation, retired their ascending thoughts into, after strict search finding an oak whereon a mistleto grew, on the sixth day of the moon (above all other times) on which was the beginning of their year, they religiously and with invocation brought them to a ceremonial banquet materials for a sacrifice, with two white bulls filleted on the horns, all which they placed under the oak. One of them" (the arch-druid generally) "honoured with that function, clothed all in white, climbs the tree and with a golden knife or scithe he cuts the mistleto, which they solemnly wrap up in one of their white garments. Then they sacrifice the bulls; earnestly calling on the All-Healing Deity to make it prosperous and happy on whomsoever they shall bestow it, and accounted it both a preservative against all poisons, and a remedy against sterility."—Note on Song ix of Drayton's *Polybion*. This most curious and elaborate production was first published with the title *Poly-Albion*, a chorographical description of all the tracts, rivers, mountains, forests, and other parts of this renowned Isle of Great Britain: a poem, in two parts; folio, London, 1612. The medicinal properties ascribed to the Misseltoe were enumerated by Pliny, and have been repeated with various approbation by herbalists, even to recent times.—Plinii *Historie Naturalis*, lib. xvi, cap. 41; lib. xxiv, cap. 4.

² This beauteous vegetable grows abundantly in the Nile and its tributary waters: anciently, its magnificent flowers were employed for crowning the Egyptian deities and kings: it is still seen on the figures of Osiris, Antinous, and other sacred personages: and, nowadays as heretofore, its feculent roots are used as food, and they have a taste resembling that of the potatoe. Prospero Alpino, M.D., visited Egypt and the Mediterranean islands in A.D. 1580: in separate figures, he represents the root, leaves, and flowers of the Lotus, accompanying them with a curious dissertation.—*Historia Egypti Naturalis*, 4to, Lugd. Bat. 1735; tom. ii, p. 75, seven figures. *De Plantis Exoticis, Libri duo*, 4to, Venetiis, 1629, p. 213–29. C. S. Sonini, *Voyage dans la Haute et la Basse Egypte*, 8vo. Paris, 1800; tom. i, p. 351. This plant is the *Nymphaea lotos*, in modern botany.

³ Herodotus, and all the ancient writers on natural history, speak of this plant as having been immemorially cultivated in the south of Europe and in Egypt for its alimentary qualities: its roots and leaves are esculent, and have a grateful taste: by the Arabs, it is denominated *Eddar*: it delights in a humid soil.—Alpino and Sonini. This is the *Arum colocasia*, an exotic species of the cuckow-pint or wake-robin.

⁴ This resembles the plum-tree, and produces the fruit called *sebsten* or *Assyrian plum*: the cultivated and wild kinds are both distinguished by Alpino, with figures: this fruit is used for medical purposes, and it yields a glutinous substance which may be substituted for bird-lime. This plant was devoted to the Egyptian Isis, who had a crescent usually depicted on her head, as the mythological personation of the Moon, whose different phases were regarded as causes of the periodical return of several diseases—

and mysterious significations. Wreaths composed of foliage from the "*Sacred Plants*" accompany that magnificent emblem of divinity—the *symbolical circle*—which encompasses the heads of insculptured Egyptian personages; and, in aftertimes, this floral diadem became

a very ancient recognition of "lunar influence" on the constitution of Man. As an object of fear and worship, Isis possessed the same attributes as those of the terrible Hecate: she was denominated *dhi-thra-mbon*, the wrathful one, and *ther-muthi*, the bereaver of life, in the primitive Coptic language. Her chief temples were at Memphis and Busiris, where the cow and the antelope were revered at her shrines. This mystical matron enjoyed the reputation of being a "divine doctoresse:" she revived her son Orus from death, and discovered many valuable medicines: so late as the time of Galen, some remedial compositions were distinguished by her name. For much curious speculation on the attributes and character of Isis, the archæologist may consult the works of Plutarch, Diodorus, Herodotus, Ælian, Galen, Eusebius, and the elaborate dissertations of Jablonsky, intitled *Panthæon Egyptiorum, sive de Diis eorum commentarius*, 8vo, Francofurti ad Viadrum, 1750. With the Linneæans, this plant is *Cordia sebestena*, and it is ranked in the *Borrngineous* family.

* This vegetable adorned the banks of the Nile, in the times of the Pharaohs; it grew there, but not so plentifully, in after-ages, when Egypt acknowledged the Roman sovereignty: the aboriginal papyrus has now disappeared, or become exceedingly rare, in that remarkable country, and divers kindred plants are honoured with its celebrated name. Pliny describes its valuable properties, and the manifold useful purposes to which it was applied. Plinii, *Historia Naturalis*, lib. xiii, cap. 11, 12, 13: Melchior Guilandinus; *Papyrus*; *hoc est, Commentarius in tria C. Plinii majoris de Papyro capita*; 4to, Venetiis, 1572. Alpino figures the plant, and says it is named *Berd* in the Egyptian dialect. By the oriental sages, it was held to possess therapeutical energies: it is the *Cyperus papyrus*, the prototype of paper.

* Under the designation *αρρμύιον*, the sea-onion enjoyed a sacred reputation in the temple of Pelusium, on account of its diuretic virtues, and activity in curing a kind of dropsy endemic in that marshy district. Pythagorus compiled "one entire volume" on the Squill, and recounted its medicinal virtues. It was this philosopher's opinion that "if the sea-onion were hanged up in the entry of any dore, it kept out all" *medicamentorum malorum* "charms, enchantments, and sorceries."—Holland's *Pliny's Natural History*, vol. ii, p. 19, 52. This is the *Scilla maritima*, the squill whose virtues are still recognised by modern physicians.

* *Musa sapientum*, the banana fig, represented the Prolific Essence, the fountain of that admirable fecundity of Providence, which constantly supplies both man and animals with plentiful nourishment: leaves of this, and others of the most fruitful plants, were added to the symbolical circle—the characteristic emblem of their deity—the source of all salutary influences, the supreme disposer of the seasons, the giver and sustainer of vital energy, the all-wise and all-mighty ruler of the universe.—*Histoire du Ciel, considérée selon les idées des Poètes, des Philosophes et de Moïse*; 2 tomes, 12mo, Paris,

the prototype of the pictorial *halo* or glory that betokens the distinction of deified sages and saints. But, in all these solemn assignments, we discern no trace of the Herbalist instituting floricultural experiments, no trace of the Botanist seeking to originate the infancy of system, for a philosophy of plants.

During their long sojourn in the "Land of Ham," the Hebrew patriarchs, and the wise men among their descendants, would naturally desire to cultivate an intimacy with the sacred as well as secular "learning of the Egyptians," as this emanated from a formidable and jealous hierarchy, whose sovereign behests proportioned the development of knowledge and civilization. Having been a high-privileged student of this erudition, from the dawn of his youth to the prime of his days, the "Legislator of Israel" would receive initiation into the deepest of its occult principles. Along, therefore, with his necessary investigations, he would designedly or otherwise become conversant with the herb-lore of Egypt, as this was entertained by the mystagogues to whose discipline the guidance and culture of his pupilage were consigned. Notwithstanding these advantages, however, his "literary remains" preserve no traces from which it would appear that he had ever chosen to facilitate the adoption of his doctrines and histories, by the introduction of floral illustrations in the form of similitude or allegory. From the Divine Books, we derive no authority for imagining that Moses ever evinced a predilection for pondering on the economy of plants—that he ever relieved the solitude of his rambles among the Arabian mountains, by engaging in the pursuits of a phytoscopist. Some few herbs and trees have been specified by the sacred writers, under expressive designations; but the first immature perceptions indicative of botanical system are inexistent with all these harbingers of immortal truth, even with Solomon himself, although "he spake of trees, from the cedar-tree that is in Lebanon even unto the hyssop that springeth out of the wall." Theirs were themes of momentous and everlasting import: with their mission, they acquired no warrant to engage in seductive declamations on the marvels of nature and the majesty of intelligence: for an indissoluble rule to individuals and families and nations, these re-

1739, and again in 1757: also an English version by J. B. de Freval, two volumes, 8vo, London, 1740; b. i, c. i, sec. 9, 11, and 14. A curious note on the sacred plants of Egypt is given by De Pauw, in his *Dissertations on the Egyptians and Chinese*; vol. ii, part iii, sec. vii. There is a very elegant English version of this philosophical work, by Capt. John Thomson, 2 vols. 8vo, London, 1795.

vealers of an eternal science inculcated the duty—an instinctive and rational duty—of constituting the discipline of man's religious faculties to be for ever the essential and predominating principle in every institute enacted for maturing the development and instruction of his other mental powers.

Under the form of introductory disquisitions, the discreet Adrian Cocquius examines a diversity of curious and recondite questions having reference to the subject of his phytographical dissertations on the Bible plants and trees.⁸ One of his sections is occupied with the solution of these profound inquiries—*Do vegetables sleep? Why do the most odoriferous herbs grow in eastern countries? Who first assigned to plants and herbs their proper denominations?* He decides that vegetables do not sleep by night, and he advances to this conclusion through a terse dialectical induction: he believes that herbs are more fragrant in the oriental than in meridional regions, in southern than in northern climates; and he ascribes this difference to the action of heat, dew, and genial showers, as the natural causes: he affirms that Adam originally designated vegetables by their generic appellations, because it is certain that the patriarch gave names to every living creature brought to him by the Creator to see what he would call them; and the erudite phytologist submits for a proposition—that, since the lord of paradise thus distinguished the several animals, he would naturally perform the same office for vegetables, because he had better opportunities of knowing them, would frequently use them as esculents, and would often, *ad Dei gloriam*, hold converse respecting them with his wife and children.

What were the sources—Phœnician or Pelasgic or Egyptian—from which the ancient Hellenic herbalists derived an insight into the pleasures and advantages of exploring the recesses of Vegetable Nature, the spirit of posterity has not hitherto been able to determine. From the birth-time of their states, however, and with a people among whom the intellectual powers displayed an exalted and wonderfully diversified energy, there would exist many votaries of Chloris⁹ endowed with a disposition to delight in adopting the genial exercises of *Herborization*, and in prosecuting researches to discover

⁸ *Historia ac Contemplatio Sacra Plantarum, Arborum et Herbarum, quarum fit mentio in Sacra Scriptura*; authore Adriano Cocquio; 4to, Ulissingæ, 1664; sec. v, p. 19.

⁹ In the Greek theosophy, Chloris possessed the same attributes as were assigned to Flora by the Roman hierarchs, in later times. In the modern botanical nomenclature, there is a term devoted to the remembrance of her divinity.

the nutrient and medicinal properties of plants. Thus, by chroniclers of the Heroic Ages, the botanical antiquary is furnished with grateful remembrances of chieftains and warriors and sages who contemplated the nature of Herbs with a view to the benefit of mankind, or aimed at describing them by distinctive characters for the diffusion of phytosophical experience. Such were Chiron, and the crowd¹⁰ of his illustrious pupils; such were Circe, Medea, Orpheus, and others of the Argonautic adventurers: and such were the instructors from whom Musæus, Homer, and Hesiod, acquired their knowledge of the moly,¹¹ the nepenthe,¹² the polion,¹³ and other salutiferous plants.

¹⁰ The Chironians were—Achilles, Æneas, Amphiarus, Antilochus, Aristeus, Castor, Cephalus, Diomedes, Esculapius, Hippolitus, Jason, Machaon, Melanion, Meleager, Mnestheus, Nestor, Palamedes, Peleus, Podalirius, Pollux, Telamon, Theseus, and Ulysses—all of whom are celebrated in the chronicles of primeval achievement. Circe was famous for her acquaintance with the poisonous qualities of herbs; and Medea astonished the people of Iolchos by restoring Æson, their enfeebled old prince, to the vigour of youth. She abstracted blood from his veins, and then filled them anew by injecting the juice of certain plants, which forthwith inspired him with sprightliness and energy—a happy result of this pristine surgery. Orpheus was venerated, both as a sage or diviner, and a physician, by the Thessalian and Thracian clans; and it is asserted by Pliny that Orpheus had the credit of being “the first man known, by all records, to have written anything curiously and exactly of simples,” and of teaching that the roots of parsneps have the property of rendering “folke amatorious.” Musæus, the son of Antiophemus appears, in mythology, as the pupil or associate of Orpheus; and, like him too, was held for a “wise one” and a physician, the inventor, indeed, of medicine as a study, and of the art of divination. Homer and Hesiod were nearly cotemporaries; and, according to Theophrastus, Pliny, and other naturalists, the two most illustrious of ancient poets were phytologists, instructed in the efficacy of particular vegetables, with their medical and chirological applications.

¹¹ Since the commentary of Eustathius on the Homeric *Moly*, many disquisitions and monographs, assertions and conjectures, have been promulgated to the literary commonwealth, as evidences of talent, industry, and erudition. Hence has it happened that different essayists bring forward their various reasons for representing the wonderful heaven-sent plant, as the water-lily, hellebore, meadow-saffron, garlic, onion, or pæony. Others regard the picture as a moral allegory; and the same expedient might be practised on any poetical difficulty. Homer's description is remarkable for clearness and brevity: the Moly, he says, has a milk-white flower, with a black root, and can hardly be eradicated. *Homeri Odyssea*, curante Barnes; græcè et latine: 2 tomis, 4to, Cantabrigiæ, 1711; lib. x, v. 304-5. *Homeri quæ extant omnia, græcè et latine, cum perpetuis Spondani commentariis*, folio, Basileæ, 1606; *Odyssea*, p. 140, 142. *Eustathii Commentarii in Homerum*

Among the herbs distinguished for their virtues by the primeval healers, there was a plant which still continues to be generally regarded with some admiration for its beauty, and immemorially considered valuable on account of its restorative energy: neverthe-

Odyseam, græcè et latinè, cura Politi et Salvini; folio, Florentiæ, 1735, p. 397. Theophrasti *Historia Plantarum*, græcè et latinè, curis Bodsei, Scalligeri et Constantini; folio, Amstelodami, 1644, p. 1129. Plinii *Opus Divinum*, cui titulus *Historia Naturalis*; folio, Parisiis, 1526: lib. xxv, cap. iv, p. 363. J. A. Siburns; *Dissertatio de Moly Hermetis Herbâ*; 4to, 1698. G. W. Wedel; *Exercitatio Mythologica de Moly Homeri*, 4to, Jenæ, 1713. D. G. Triller; *Dissertatio de Moly Homérico*; 4to, Lipsiæ, 1716. According to Wedel, the moly is a nymphæa: with Triller, it is neither a species of allium nor a nymphæa, but undoubtedly a black hellebore, "cui flos candidus sit, et nigra radix, quæ difficulter effodiatur."

¹² Like his marvellous moly, Homer's *Nepenthe* has occasioned many phytological discussions. The poet represents it as a product of Egypt; and, when mixed with wine, as a medicine capable of assuaging grief, calming anger, allaying pain, producing oblivion of misfortune, and extinguishing sensibility.—*Odyssea*, lib. iv, v. 221. With *Pliny*, some essayists regard the *nepenthe* as an *Inula helenium*, or elecampane, because the specific appellation retains the name of the wife of Menelaus, Helen, whom Homer describes as the giver of this anodyne potion to Telemachus and his companions. Galen considered it as a kind of bugloss, *Anchusa italica*, and this view has been adopted by his disciples. Plutarch will have it to be the *Borago officinalis* or common borage; and, by certain inquirers, the question has been propounded—what if Queen Helen's delicious beverage was genuine coffee, the most choice of all potations. In books, it stands as hemp, henbane, and saffron; but, by most pharmacologists, with Wedel and Sprengel at their head, it is considered as a narcotic, in which the opium constitutes the chief ingredient. *Peter Petit*; *Homeri Nepenthes, sive Helenæ medicamento, lethum, animumque omnem ægritudinem abolente, et aliis quibusdam facultatibus prædito, dissertatio*; 8vo. Trajecti, 1689. Dr. Petit examines all the notices of the *Nepenthe* in ancient writers, and concludes that it was a vegetable, without specifying the particular plant. *G. W. Wedel*; *Programma de Nepenthe Homeri*; 4to, Jenæ, 1692. It is opium, according to the professor's judgment. *Kurt Sprengel*; *Historia Rei Herbariæ*; 8vo. Amstelodami, 1807–8, tom. i, p. 25. The commentaries of Eustathius and Spondanus on this Homeric vegetable, and the several writers whose speculations on the same subject are examined by Duport, comprize much curious erudition and critical research in the dark fields of botanical archæology. *Jac. Duport*, *Homeri Gnomologia, duplici Parallelismo illustrata, græcè et latinè, cum observationibus ac notis*; 4to, Cantabrigiæ, 1680. *A. L. Marquis* enters into a discussion on the substances which have been represented as the *Nepenthe* of the ancients, and on the probability of its being an opiate.—*Dict. des Scs. Meds.* tome xxxv, 444–7.

¹³ Theophrastus, in the twenty-first chapter of his ninth book, treats of the herbs which affect the human mind, and thus led to peculiarity of con-

less, although its nature and its name are not recorded as having been discriminated in Eden, yet the traces of its botanical and medical history disappear amid the mists of remote antiquity, while its exhibitions as an ornament of mythological poësy, are abundantly singular, and have occasioned much variety of ingenious speculation among the adepts in vegetable archæology. For a reasonable curiosity, then, there may be gratification in combining the detached sketches which perpetuate the celebrity of this immortal plant, and the first legendary application of its energies in accomplishing the cure of a wounded deity by its time-honoured employer,

Pæon the Physician.—Than that of many personages who enjoy an immortality derived from the rite of mythological canonization, more deservedly commemorated is the renown of Pæon, who was distinguished, in heroic story, by the venerable designation of *ἰατρὸς ἁνῶν, deorum medicus*, physician of the gods. Exalted as was his office, however, and high as were the achievements performed by him with the applications of his *διττητά φάρμακα*, pellentia dolorem medicamina, anodyne or pain-subduing drugs, there is an unusual deficiency of information respecting him, in all those circumstances of life and

duct: and, among these, he allots distinction to the *Polion*, as a plant capable of inspiring men with the most sublime and redoubtable magnanimity. He states this on the authority of Musæus and Hesiod; and then he adds that the herb is dug up by night, under a temporary tent. On this word, his commentator, Bodæus, offers a piece of ingenious literary criticism. *Theophrasti Historia Plantarum, græcæ et latine, curâ Bodæi; folio, Amstelodami, 1644, p. 1172-4.* Dioscorides describes the Polion by its botanical and medicinal characters; and, on his testimony, it acquired the character of an active and useful remedy. By Dr. Turner, with whom commenced the true era of English botany, the estimate of "the Vertues of Poly out of Dioscorides," was transferred into an English version. The broth, he says, of the herbe Poly dronken, healeth the styngyng of serpentes, them that have the dropsey and the jaundes, and also them that are greued in the milke, so that it be vsed with vinegre. It vexeth the stomack and engendreth the hedach, and it lowseth the belly. If it be strowed vpon the ground, or if it be burned and made to smooke, it dryueth away serpentes, and if it be layd to emplasterwyse, it byndeth woundes together. The same notions are adopted by Lyte, Gerarde, Parkinson, and nearly all the older modern phytographers, English and continental. *Dioscorides: Opera Omnia, curâ Saraceni: lib. iii, cap. 124, p. 225.* The First and Seconde Partes of the Herbal of William Turner, doctor in physick; folio, Collen, 1568, part ii, p. 96. The Tripolion of Dioscorides is evidently mistaken for the Polion by Pliny, in his description of that plant in the seventh chapter of his twenty-first book; but, in the twentieth chapter, he gives the Greek botanist's account, with additions and improvements.

character which constitute the elements of a biographical record. Nearly the whole of these relics has disappeared in the decay or overthrow of pristine knowledge.

Pæon occupies an eminent position, as the Heavenly Healer, in the traditionary memorials of Medicine; and his earliest celebrity is displayed in a scene of Homer's¹⁴ heroical representations. His office and its exercise appear as evidence that, when the theogonists endowed their deities with corporeal susceptibility, there was a considerate benevolence in furnishing them with a sagacious and experienced physician. The bardic narrative of Pæon's medical exploits, may be rendered in an epitomized version.

One of those ferocious contests which have impressed an enduring character on the Greek and Trojan armies, displays for an episodic incident the vindictive daring of Diomedes,¹⁵ who headed the Ætolian soldiery. From a huge stone hurled by this athletic champion, Æneas received a dangerous contusion of the thigh, and would have perished on the field of battle but for the interference of his mother, Venus, who rescued him from the imminent peril. Throwing her lily-white arms around the hero, and concealing his person with the skirt of her radiant mantle, the goddess was hastening to repose him in a secure retreat, when the enraged Ætolian pursued her furiously; and, launching his spear, it pierced her wrist, inflicting a wound from which outsprung the "blood immortal,"¹⁶ the dew-bright fluid that

¹⁴ Homeri Ilias et Odyssea, græcè et latine, curâ Josue Barnes, 4to, 2 tomi, Cantabrigiæ, 1711: Iliadis, lib. v, ver. 401 et 900.

¹⁵ In the classical biographies, the fortunes of Diomedes and the mystical transformation of his companions, form the subject of various romantic traditions. Homer makes Dione, in the consolatory address to her wounded daughter, introduce an obscure allusion to this prince's destiny. My child, she says, it was Pallas who impelled Tydides to insult and maim you. Fool was he to forget that they who madly fight against the gods are never blest with length of days: never do their young ones, sitting on their knees, give them the pleasing name of father, on returning from sanguinary warfare. Brave as he is, let Diomedes beware lest he provoke some powerful deity, and lest Ægiale, his gentle consort, frightened by an inauspicious dream, should fill her palace with lamentations for her husband.—Iliad, book v, ver. 403—414.

¹⁶ Homer's phrase is ἀμβροτὸν αἷμα; but, as if in explanation, he designates the "immortal blood" an ἵχνη, the diaphanous fluid that circulates in the blessed deities who neither eat bread nor drink ἄσπετον οἶνον, red wine: hence they are bloodless, and held to be ἀθάνατοι, undying. Eustathius advances some curious observations on this passage of the Iliad, and he seems willing to adopt the proposition—that, since the gods do not eat bread and drink wine, but take nectar and ambrosia for their viands; therefore, the gods

keeps the gods from dying. Raising a loud shriek, she resigned her son to the protection of Phœbus; and, obtaining from Mars the use of his chariot, the daughter of Dione¹⁷ rapidly ascended to the Olympian mansions, and soon had the injured arm restored to health by her mother's skilful surgery. This done, Dione added a theological lecture: Whatever pain you feel, my daughter, endure it with patience. You are not the first immortal that has suffered from the impious audacity of men, for the gods sometimes delight in employing it as the means of vengeance in their mutual quarrels. Mars, even formidable Mars, has been a sufferer from mortal outrage, when Otus¹⁸ and the bold Ephialtes bound down the god with ponderous chains in a brazen dungeon, where he had all but perished, when Eriboea revealed his state to Mercury, and he unseen accomplished the captive's deliverance. And Juno, too, experienced excruciating pain when Amphytrion's¹⁹ son darted a three-barbed arrow into her right breast. Nor was Pluto himself, the grizzly god of hell, safe from the insults of Alcides,²⁰ even in the murky mansions of the

have pellucid blood and enjoy immortality.—*Commentarii in Homeri Iliadem, cum versione Politi et notis Salvini*; folio, Florentiæ, 1735, p. 1186-7.

¹⁷ Dione was the daughter of Nereus, the sea-god, by Doris, who brought him fifty daughters—the Nereides—to whom divine honours were paid, as to the rest of the deities. From her intercourse with Jupiter, Dione became the mother of Venus, according to Homer's interpretation of the theogony.

¹⁸ Otus and Ephialtes, in bardic story, were the twin offspring of Neptune by Iphimedia, the wife of Alceus the giant: hence came *Alcides*, their poetical designation. In them, the energies of "organic life" appear to have been extremely vigorous; for, according to the record, they grew nine inches every month till they were slain in an impious warfare against the gods, "in the ninth year of their age." With allusion, perhaps, to these fictions, the term *Ephialtes* has been applied to the Incubus or night-mare, a distressing and not very manageable affection; it is the *Ælf-sidenns* or elf-squatting of the Anglo-Saxon pathologists. Eustathius discerns an ingenious allegory in this fable of the Alcides—namely, the natural supremacy of Man's moral and intellectual powers in restraining and directing his animal inclinations. Eriboea was one of Juno's surnames, and Homer here distinguishes her by the epithet *πριεσλλης*, most beauteous: with her connivance, Mercury procured the war-god's liberty by a stratagem.

¹⁹ Hercules is poetically denominated the son of Amphytrion, king of the Theban tribes, because the "strong man" owed his birth to the misfortune of Alcmena, this prince's bride, whom Jupiter deceived by one of his cowardly expedients. Alcmena's history is represented in the twenty-ninth of Hyginus' mythological fables.—*Mythographi Latini, curâ Muncheri et notis variorum*; 8vo, 2 toms, Amstelodami, 1681.

²⁰ Alcides, the *Strong One*, was the name conferred on Hercules, with reference to his extraordinary corporeal powers, his *αλσος*, or physical strength.

dead. With a keen shaft, Alcmena's son transfixes the shadowy deity in the shoulder. Wrathful and anguished, he fled to heaven, the abode of Ægiocian Jove,²¹ where Pæon, the divine physician, soon healed the gash with his sovereign balsam.

Another rencounter occurred between the intrepid Ætolian chieftain with Mars himself, the god of war, whose maddening energy was then fatally encouraging the hostile combatants. Inspired by Pallas, who invisibly directs his missile, the mortal warrior hurls a javelin at his immortal antagonist: the weapon pierces his "beauteous form," and stops the strife-maker's ruthless career. The anguished deity forthwith draws out the dart; and, raising a frightful roar, in a cloud of dust he ascends to the Olympian mansions. There, reproachfully pointing to the divine blood issuing from his wound, and addressing himself to his sire, Saturnian Jove, the angry war-god inveighs vehemently against Minerva, denouncing her as the "mad pernicious maid" who had caused his disgrace and pain. The "Thunderer" lends an attentive ear to this complaint: and, with a reproof for its querulous petulancy, he consigns his son to the care of Pæon, who soon heals the bleeding divinity by the application of styptic remedies.

Having thus commemorated the "celestial doctor's" skill and the wondrous efficacy of his medicine, the poet adds a description of the surgical process and its results. As milk—he sings²² in sweet similitude—as milk full soon coagulates when the fig-juice, *ορεσι*, is dexterously stirred into the snow-white liquid, so did the sides of the martial god's wide wound right quickly run together and the parts become regenerated. Thus were restored his health and beauty; and, after enjoying an ambrosial bath prepared by Hebe the youth-giver, he arrayed himself in gorgeous robes and resumed his seat beside the etherial throne, exulting in his glory.

Homer's legendary recitations, and those of other early Hellenian poets, afford the antiquary some authority for inferring that the Science of Medicine was cultivated in Egypt during the first ages of the

The term has also been deduced from Alcæus, the father of Amphytrion, his mother's husband.

²¹ Jupiter had the appellation *Ægioclus* from his being nurtured by the goat Amalthea, and from his using her skin as a shield, when engaged in crushing the Titanic rebellion.

²² *ΟΜΗΡΟΥ ΙΛΙΑΔΟΣ Ε*, 835—906. This is a book of blood and carnage, where mortals and immortals are represented as engaged in fierce and vindictive conflict.

postdiluvian world, and that the priests of Ammon,²³ who also administered the physician's office in this country, professedly referred the origin of their medical knowledge to Pæon the Healer, whom they venerated as a deified personage. Homer introduces patriarchal tradition for an ornament of his poetry, and it creates a pathetic importance in his episode of Helen's potion at the festal entertainment given by her husband, Menelaus, to the prince Telemachus and his companion. He represents the queen as preparing an exhilarating and enrapturing beverage, prepared with various wonder-working ingredients, after a form revealed to her by Polydamna,²⁴ the wife of Thon, king in Egypt, which, as the minstrel adds, spontaneously yields an exuberance of medicinal herbs capable of determining salutary or baneful results, according to the manner of their combination. In that prolific land, he further sings, every *ἰατρός* or *healer* is the wisest of mankind, its physicians being sages, and Pæon their progenitor.

²³ According to the Egyptian mystagogues, Ammon possessed the divine and sovereign attributes which Jupiter had ascribed to him, in aftertimes, by his Grecian votaries. In the most ancient vernacular language of Egypt, this deity was denominated Amun, the radiant source, the sun. The name appears in later history as *Amūn*, Ammon, and Hammon, whose rites were celebrated at Thebes, in a splendid temple; and, in the form of a ram, he received adoration, as the symbol of the sun. A. A. T. Macrobius: *Saturnalia et Expositio in Somnium Scipionis*; folio, Venetiis, 1472; lib. i, cap. 18. P. E. Iablonsky; *Pantheon Ægyptiorum*; 8vo, Francofurti, 1750; lib. ii, cap. 2.

²⁴ This princess bears the credit of having initiated Helen, during a brief sojourn in Egypt on her homeward pilgrimage after the destruction of Troy, into much "useful knowledge" in the philosophy of magic and medication; and, among other valuable revelations, she instructed this frail matron in the methods of administering the herb, *Helenium*, which the phytographers employ to signalize her name. Dioscorides describes an *Helenium*, and denotes its salutiferous qualities, without speculating on the origin of its appellation. Pliny, however, reiterates the fancy of its first germination, and his exhibition of its virtues displays the charms of "liberal principles." It sprang from the tears of Helen, he says, and exercises a particular influence in preserving beauty, and that they who use it are sure of being amiable and gracious, winning love and favour wherever they come. Dioscoridis Opera, Serapenti; lib. i, cap. xxvii, p. 24. Plinii Historia Naturalis, lib. xxi, cap. xxi. Theophrasti Historia Plantarum, Bodæi, p. 683. Matthioli Opera Omnia; folio, Basileæ, 1674, p. 72. In his curious poem, ΘΗΡΙΑΚΑ, v. 314, Nicander of Colophon relates, with approbation, the hospitality of Thon to the Spartan prince and his queen after their dangers in a storm, and the loss of their pilot from the bite of a serpent. Thon was king of Canopus, a place renowned for the worship of Serapis and the dissolute manners of its inhabitants.—Nicandri Theriaca et Alexipharmaca, græcè, latinè, ac Italicè, curis Gorreæ, Salvini, et Bandinii; 8vo, Florentiæ, 1764, p. 55, 147.

During the earlier stages of ethnic mythology, both the secular and sacerdotal devotees of Polytheism characterized Pæon by precise distinctions of his person as an illustrious mortal, and of his office as "physician of the gods." Aftertimes, however, found the ignorance or zeal of a superstitious enthusiasm blending each of these characters with the attributes of Apollo, the god of many things and of medicine. Nevertheless, though Apollo the deity became Pæan²⁵ for striking the Python dead, yet neither fact nor fiction has endowed Pæon with divine prerogatives. Although the work of some mystic's or minstrel's ideality, his exaltation attests the merit accorded by posterity to his consummate proficiency, as a mortal sage, in the exercise of pre-eminent intellectual and moral powers.

From the preceding sketches, a curious inquirer may deduce reasons for deciding that while employing the medical character as an ornament of heroic minstrelsy, Homer considered Pæon as a man²⁶ of sagacity and prudence, renowned for his skill in prescribing the appliances of medicine; and, in their annotations on the Iliad and Odyssey, the scholiasts make a perfect distinction between Pæon the medico-chirurgical philosopher and Apollo who presided over the medical sciences. Homer nowhere characterizes Pæon otherwise than as an *ἰατρεὺς* or healer, unattended with any epithet implying his endowment with divine attributes. On the other hand, Apollo is always distinguished in the Homeric songs, with the power and character of a deity. Thus, while Pæon is occupied with the cure of Mars in heaven, Apollo busies himself on earth with encouragements for the Trojan army and its leaders. He protects Æneas from the furious assault of Diomedes: he persuades Mars to re-animate the wavering Trojans: he himself shouts from "Ilion's topmost tower," exciting them to sustain the conflict: he descends from the tower to meet "the blue-eyed maid" in the "beechen shade:" he solicits her

²⁵ Pæan, the Apollonian epithet, appears to be founded on the verb *παιών* *percussio-ere*, to strike or smite, with allusion to Latona's son and the manner of his destroying the Pythian serpent. When at length the fantastic genius of mythology had exalted Apollo to the dignity of presiding, as a tutelary divinity, over Physic, its philosophy and votaries, then it might become the fashion to honour him with a new designation in the name of Pæon, who had immemorally represented all that is useful and venerable in the medical sciences.

²⁶ Homer represents him as the physician from whom the Egyptians derived their medical philosophy; and, in their commentaries, the *humanity* of Pæon is recognized by Eustathius, and by Villoison in his edition of the Iliad; folio, Paris, 1788, b. v, v. 899, p. 156.

to stop the fight and decide the war by a single combat; and he up-raises Hector whom Ajax had struck to the ground, with a huge stone.²⁷

In his observations on the *Odyssey*, iv, 232, Eustathius avers for an historical truth, that Pæon is altogether different from Apollo; and, in confirmation of this position he adduces a passage of Hesiod's wherein the theogonist contradistinguishes Phœbus-Apollo to Pæon the experienced pharmacosophist.²⁸ The same expositor derives Pæon, a designation of Apollo, from *ᾠαίνω*, which is *ἡγεῖσθαι, medeor, curo-are*, to heal, and this etymology²⁹ is adopted by the scholiast on Aristophanes³⁰ who both retraces the ancient *Io Pæon* or hymn of triumph to *ᾠαίνω*, and also distinguishes this word from the appellation of Him who held the sublime trust of physician to the gods. Among the songs of Solon,³¹ moreover, and to the same effect, there

.²⁷ These incidents are related in the fifth, sixth, and seventh books of the *Iliad*, with the accompanying circumstances.

²⁸ Hesiod's designation of the doctor is—Pæon, who knew every medicine, *πάντων φάρμακον ἔδν*; with reference to his excellence in operating and prescribing, to his high reputation for healing wounds and curing diseases.

²⁹ The observations of Eustathius are explicit. Since, he says, Homer represents the gods as liable to human afflictions, so he furnishes them with a physician, after the manner of men, that he might cure their incidental wounds. To this physician, the poet also assigns a name, deduced from the verb *ᾠαίνω*, which means the same as *ἡγεῖσθαι*, and signifies to heal, and therefore he calls him *Παῖων*, the healer. Then, after observing on the wounds of Pluto, Mars, and Venus, he adds, but moreover Apollo himself is denominated Pæon in a triumphal hymn, and this was likewise designated Pæon, and chaunted in celebration of a victory.—*Commentarii in Librum E Iliadis*, p. 1236. There is high probability, however, in the proposition, that the etymological source of the term *Peon*, in its medical acceptations, will be found in a dialect which preceded those of Greece, in Europe, namely, the Celtic or Gothic language, before either became contaminated by the admixture of neological improvements.

³⁰ Scholia in Aristophanis *Plutum*, v. 636. *Aristophanis Comediarum, auctoritate Libri præclarissimæ sæculi decimi, emendatæ a Ph. Invernizio; accedunt criticæ animadversiones, Scholia Græca, indices et adnotationes*; 8vo, 3 tomis, Lipsiæ, 1794—1811. *Aristophanis Plutus et Nubes, græcæ et latinæ, cum scholiis Græcis antiquis, et aliis quibusdam notis, curâ Joannis Iæng*; 8vo, Londini, 1732. Bishop Leng published his edition of these two celebrated comedies in 1695: he died in 1727, with the reputation of a distinguished classical scholar and divine.

³¹ *Analecta Veterum Poetarum Græcorum, curâ R. F. F. Brunck*; 8vo, 3 tomis, Argentorati, 1785: tom. i, p. 67. In Solon, the highest attributes of a philosopher and legislator were combined with the persuasive eloquence of a poet. He promulgated most of his laws in verse, for the purpose of facilitating their reception by the Athenian people.

is an elegy which shows this patriotic legislator recognizing the separate individualities of Pæan and Pæon: in this piece, he speaks methodically of Apollo with his priests in the first instance, and then of the physicians who derived from Pæon their knowledge in the treatment of diseases. Hence come the facts which prove that so late as the times of this Sage the distinction between these two personages—the god of medicine and the man who medicated the gods—is faithfully maintained by the revered instructors of nations in history and the sciences. Nearly one thousand years afterwards, and on two occasions, Virgil ingeniously discriminates the functions of a physician from the providence of a deity. When sketching the fate of Hippolytus, for an heroic illustration, the poet records the youth's restoration to life by the application of Pæon's³² herbs and Diana's restorative care. Again, he introduces Iapix commencing the treatment of Æneas' wounded limb with tucking his robes after the Pæonian³³ fashion, and then fomenting the lacerated parts with the potent plants over which Phœbus himself presides.

Whether then, like Esculapius, Machaon, Hippocrates and others, the physician Pæon imparted an expressive denomination to his office, or whether he himself obtained a name from his office and its beneficent results, is a question which may long remain undetermined. Most probable, however, are the circumstances that, from an unremembered date, some healer of the people must have been the prototype of him who was deemed worthy of the extraordinary dignity of "physician to the gods," in the representations of mythology; and that, from his illustrious character, originated the venerable designations of Pæonian³⁴ race for physicians, Pæonian fashion

³² *Pæoniis revocatum herbis et amore Dianæ*; Virgilii *Æneidos*, b. vii, 769. Diana represents her brother Apollo in this scene: she was late of receiving her medical deification from the theogonists.

³³ *Iapix retorto Pæonium in morem senior succinctus amictu, multa manu medica Phœbique potentibus herbis nequidquam trepidat, nequidquam spicula dextra sollicitat, prensatque tenaci forcipe ferrum*; *Æneidos*, b. xii 400. Here, *trepidat* means *trepidanter facit*, he proceeds with circumspection, or anxiety for the result. This sketch exhibits the poet's accuracy in describing a surgical operation.

³⁴ *Παιδὸς τῶν γυναικῶν, Pæonis sunt ex προαπιά*, the progeny of Pæon, the members of his profession; *Odyssea*, iv, 232. Pæonium in morem, after the manner of Pæon; Virgilii *Æneidos*, xii, 401: according to the practice of surgeons; L. Hortensii commentarius in *Æneidos*, xii, 401. *Pæoniæ Herbæ*, healing plants; *Æneidos*, vii, 769. *Παιωνίῳ φαρμάκῳ*, salutary drugs; Plutarchi *Opuscula*. *Φαρμάκον παιωνίον*, in *Æschyli Agamemnone*, has the same meaning.

for the custom of surgeons, Pæonian herbs for medicinal vegetables, and Pæonian pharmacy for therapeutical compositions.

Some expert dialecticians³⁵ endeavour to evince by argument or evidence that most of the personages adorned with divinity in the ethnic Pantheon are mere fantastic or fallacious representations of the primeval worthies whose biography is briefly chronicled in the Mosaic histories. With these well-meaning speculatists, there might be a trial to decide the question, whether the man translated by the magic of mythology to the "Olympian mansions," and charged with the Pæonian offices, was not a disfigured personation of the patriarch who "walked with God, and he was not, for God took him?"

Such, then, are the fair pictures of Pæon, the "divine doctor," as they may be contemplated in the temple of heroic minstrelsy. In this sanctuary of chivalrous and patriotic renown, his memorial is honoured far beyond those of all the other undeified sons of men; and, whoever might be the personage in whom the Pæonian character was naturally exemplified, that personage must have transcended the best of mankind in the highest attainments of virtue and philanthropy. Alike desirable and delightful are the cenotaphs erected, from gratitude for the meritorious achievements of sages and heroes, in structures of statuary or architecture; but more desirable to the generous mind are the monuments which, consecrated in the Temple of Nature, perpetuate the excellencies of philosophers who, by research and reflection, have enlarged the domain of almighty Science in developing the mysteries of material and mental existence. In this immortal Fane, immemorially devoted, still flourishes the fame of Pæon, and it endures imperishable, through the changes of three thousand years, in the freshness and beauty of

Pæony the Plant.—With a view to mystify the sentiment of veneration in the Egyptian people, their hierarchy employed a sacred language instituted from the most remote ages; and, so late as the fourth century,³⁶ several works on Natural History, composed in it,

³⁵ An ingenious speculation of this kind was propounded by Dr. Stukeley, in his comment on the nineteenth ode of Horace's second book, shewing the Bacchus of the Heathen to be the Jehovah of the Jews. *Palseographie Sacra*; or discourses on monuments of antiquity that relate to sacred history; 4to, London, 1736.

³⁶ This is affirmed by Heliodorus, who about this time wrote his beautiful and elegant romance, in which, as in Telemachus or Anacharsis, much information concerning the ancient Ethiopian and Egyptian nations, is communicated. Heliodori *Æthiopicorum libros decem, græcè et latine, ex versione Stan. Werscheuiczki, Jo. Bourdelotius emendavit, supplevit, ac an-*

were preserved, with the animals and plants described under symbolical designations. Thus, Ivy was *schén-osiri*, *εχνίρεος*, the plant of Osiris;³⁷ Vervain, *verbena*, the tears of Isis; Pæony, *pæonia*, the blood of Thermuth; Mugwort, *artemisia*, the heart of Bubastis; Squill, *bulbum scilliticum*, the eye of Typhon; Saffron, *crocus*, the blood of Som; Horehound, *marrubium*, the seed of Or; with many others bearing an equally enigmatical import.

For nearly fifteen hundred years, the Pæony-shrub has been extensively and assiduously cultivated in China, and also in some European green-houses, for the beauty of its flowers; and, as happened in Holland with the tulips, this roseate plant excited a sort of *Pæonimania* among the herbalists in the land of its growth. Dor describes it as the *Pæonia arborea*; with Sims, it is the *P. mou-tan*, the specific term being adopted from the Chinese phytology. By the oriental floriculturists, it is denominated *Hoa-ouang*, the king of flowers, and *Peleang-kin*, the hundred ounces of gold, in allusion to the excessive sums given for certain of its varieties. It is often represented in Chinese paintings, along with the Camellia and other specious plants.

European botanists derived a very interesting account of the Mou-tan or pæony-shrub, about fifty years ago, from the Abbé Grosier,³⁸

inadversiones adjecit; 8vo, Lutet. Parisiorum, 1619; lib. iv, p. 174. Of this interesting work, there have been six different English translations, by Underdowne, in 1577; by Fraunce, in 1591; by Barret, in 1622; by Lisle, in 1638; by Tate, in 1686; and by an anonymous hand, with the title, "The Adventures of Theagenes and Chariclea, a romance, translated from the Greek of Heliodorus;" 12mo, 2 vols, London, 1791. This last is highly commended as a faithful and spirited version.

³⁷ Osiris was a symbol of the sun, the same as Bacchus in the most ancient Greek mythology. Isis and Ceres had the same divine honours ascribed to them. Thermuth was Nemesis, the inflictor of just punishments. Bubastis represented Lucina in the Egyptian theology. Typhon, in the same code, was the genius of mischief, whom the Greeks mistakingly held to be Typhœus, the rebel giant, whom Jupiter crushed for his impiety. Som had also the names Dsoman and Chon, and was the same as Hercules, his appellation signifying strength or power. Or became Horus with the Latins, and the Greeks made him Apollo, the source of active energy. Plutarchi de Iside et Osiride Liber, græcè et anglicè, Græca recensuit, emendavit, commentariis auxit, versionem novam Anglicam adjecit Samuel Squire, A.M. 8vo, Cantabrigiæ, 1744. P. E. Iablonsky, Pantheon Ægyptiorum, Prolegom, sect. xxx, p. lxxv.

³⁸ Jos. Ann. Mar. de Moyriac de Mailla: Histoire Générale de la Chine, traduite du Tong-Kien-Kang-Mou, publiée par l'Abbé Grosier, avec la description de la Chine; 4to, Paris, 1777-85, 13 tomes. The thirteenth volume of

who devotes the fourth book of his comprehensive *Description de la Chine* to an outline of its natural history. After the popular tradition, he relates how a traveller found a pæony on its tree in the mountains of Ho-nan; and, being struck with the novelty, he tore up some of the roots with the earth adhering to them, and planted them in his garden. Without knowing the origin of this shrub, a bonze imagined he could procure one like it by grafting. The attempt succeeded, and his pæonies were more beautiful than those which were brought from the mountain. This plant soon engaged the attention of all the florists; and, by skilful culture, they brought it to perfection. Individuals pushed their rivalry in this pursuit with the extravagance of infatuation; this became general; and even the provinces contended for superiority of skill in raising the Mou-tan, that they might enjoy the glory of presenting the finest to the emperor.

With naturalists, the Mou-tan seems to claim pre-eminence, not only for the splendour and multitude of its flowers, and the sweet odour with which they aromatize the surrounding atmosphere, but also for the numerous leaves which compose them, and the beautiful golden spots wherewith they are interspersed. This shrub shoots forth many branches, and these form a top as large as those of the finest orange-trees that are raised in boxes. Sometimes it grows to the height of eight or ten feet, but the flowers are then less beautiful, and the branches cannot sustain their weight. Its root is long and fibrous, pale yellow in colour, and covered with a greyish or reddish rind; the leaves are deeply indented, and of a much darker green above than below; the flowers are composed of numberless petals, they blow like a rose, and are supported by a calyx with four leaves. From the bottoms of the petals several stamina arise without any order, and bearing on their tops small antheræ of a beautiful golden colour. Like that of the common pæony, the fruit of the Mou-tan bends downwards, bursts when it becomes dry, and then sheds the seeds.

- this comprehensive History comprizes the Description of China from the Abbé's own pen: it was afterwards reprinted in two volumes; 8vo, Paris, 1786. An English translation of the Abbé's Description was given by an anonymous hand; 8vo, 2 vols, London, 1788. The fourth book, containing nine chapters, p. 343—562, is occupied with the natural history of the Chinese provinces. Ogilby furnishes a concise description of this vegetable, under the name Moutang, in his *Atlas Chinensis*; folio, London, 1671; part ii, p. 678.

When the Abbé was collecting materials for his "Description," three kinds only of the Mou-tan were distinguished in the Chinese botany—the common, the dwarf and the shrubby, each requiring a different manner of culture. At that time, the last had nearly disappeared; the dwarf was little esteemed and not much cultivated; the first was generally dispersed. It is trained like an espalier, in the form of a fan, bush or orange-tree, and some plants of this kind are made to flower in spring, others in summer, and others in autumn. They are all divided into single and double, with red, violet, purple, yellow, white, black and blue colours; and these tints, being varied by as many shades, produce an incredible number of different kinds. The Chinese florists possess the secret of changing the colour of their Mou-tans, and also of giving them whatever tints may be desired; but they cannot produce this effect except upon those plants which have never had flowers.

Like flower-fanciers elsewhere, the Chinese herbalists note the characters which impress a Mou-tan-pæony with the marks of exquisiteness. To please the eye of an herb-sage, a Mou-tan must have a rough, crooked stalk, full of knots, and of a blackish green colour: the branches must cross one another, and be twisted into many fantastical shapes; the shoots that proceed from them must be of a delicate green, shaded with red: the leaves must be large, of a beautiful green, very thick, and supported by reddish stalks: the flowers must blow at different times, in the form of a tuft, be all of the same colour, and stand erect upon their stems: they must also be seven or eight inches in diameter, and exhale a sweet agreeable odour. By this important revelation of Chinese secrets, from the pen of an Abbé so kindly communicative, the rivalry of European floriculturists might be aroused to renew an attempt to outdo their oriental competitors in the generous strife of perfecting the breed and the beauties of Pæony shrublets.

Pæonies naturally prefer upland habitats; and the slopes of Ida, or the margins of its Alpine springs, appear to have been the fields of herborization where the beauty of their flowers originally attracted the consideration of naturalists, and where the first experiments would be instituted for determining the character of their salutary powers. These were appreciated by experience, genuine or assumed, in those long-departed days which far precede the earliest records of medical or botanical history. Hence it is found that at the time when ancient physicians conducted the treatment of diseases according to the principles and method recorded in the Hippocratic scrip-

tures, the Pæony enjoyed an established reputation as a vigorous medicinal agent: but, in that venerable collection, the herb has a different appellation; and there it is *Γλυκύριον*, the sweetling, with reference to its fragrance or its effects.

Theophrastus deservedly occupies the high distinction of standing as the "father of rhizotomists," or practical botanists. He composed an elaborate History of Plants, and rested its principles on the knowledge of phytography, as this existed about three centuries and a half before the Saviour's nativity. In the hallowed remains of this history, the term *Παυρία*³⁹ makes its earliest appearance as the appellation of a plant. This occurs in the ninth chapter of his ninth book, where he exhibits and criticizes the observances enjoined by the "pharmacopolists and rhizotomists," for the right preparations of this celebrated vegetable. His notes were adopted by Pliny,⁴⁰ whose translator converts them into a curious paraphrastical version. The herbalists direct that the Pæony, which some call Glycyside, "must be digged vp in the night season, for feare that the wood-speight or hickway (*woodpecker*) should see them: for, in the day-time, the said bird would flie in their faces that carry it away, and be readie to job out their eies. Also, in the very drawing of the roots out of the ground, there is some danger lest their tiwill (or bowels) fall out of their bodies who are employed about that businesse. But," he observes, "all this is a mere fabulous and vaine inuention, deuysed onelie to make folke beleeuve that this is an herbe of wonderfull operation."

Next among the relics of ancient botany, and more than two centuries afterwards, Dioscorides enumerated, as no recent discoveries, the characters and properties of the Pæony in his *Ἱστορίῃς Ὑγίαις*,⁴¹ and, from this convenient source, the descriptions of its kinds, and of its virtues as a medicinal remedy, have been transcribed, with different measures of modesty, into most of the subsequent Greek, Latin, Arabian and mediæval expositions of Vegetable Nature and its economy. Hence, his observations on this herb afford reason for regarding the name and the precautions observed in collecting the

³⁹ Theophrasti Historia Plantarum, curâ Bodæi; lib. ix, cap. ix, p. 1011. The annotations of Bodæus on this chapter are copious and elaborate, abounding with curious phytological criticism.

⁴⁰ Holland's Pliny, book xxvii, chap. x, p. 282. The leaves of pæony, he says, have the scent of myrrh.

⁴¹ Dioscoridis Opera, græcè et latine, curâ Saraceni; lib. iii, cap. 157, p. 237.

Pæony, were established among the "medicamentarians" at the time when Theophrastus compiled his History of Plants; and, that its energy, in various diseases, had been experientially determined by physicians, when Dioscorides was engaged in collecting his "elements of medical botany." His original descriptive picture of the Pæony, and his precepts for prescribing it with the design of removing sickness, together with the ceremonies acknowledged by ancient ritualists as necessary to be observed in gathering this benign vegetable, are freely or faithfully registered in the successive collections of Galen,⁴² Oribasius,⁴³ Paul of Ægina,⁴⁴ Apuleius,⁴⁵ Avicenna,⁴⁶ Serapion,⁴⁷ Macer,⁴⁸ Ægidius,⁴⁹ Cuba,⁵⁰ Sylvaticus,⁵¹ Plateari-

⁴² Claudii Galeni de Simplicium Medicamentorum facultatibus, libri undecim; Theod. Gerardo interprete; folio, Parisiis, 1530.

⁴³ Oribasii Collectorum Medicinalium libri xvii; J. B. Rasario interprete; 8vo, Parisiis, 1555; lib. xi, p. 194, in vocem Glycysidem.

⁴⁴ Pauli Æginetæ Opera, Guinterio interprete, cum annotationibus Cornarii ac scholiis Goupyli et Dalechampii; 8vo, Lugduni, 1589; lib. iii, p. 246, lib. vii, p. 717, in vocem Glycysidem.

⁴⁵ L. Apuleii de Medicaminibus Herbarum liber, ex recensione et cum notis J. C. G. Ackermann; 8vo, Norimbergæ, 1788, cap. 64, p. 228. Dr. A. gives a prefatory disquisition on the life, times, and writings of Apuleius, forming an important contribution to the history of botany. Apuleius enumerates a dozen of synonymes of the pæony, and considers it as indigenous among the Cretan and Sicilian mountains; the seeds, he says, shine by night when it is usually gathered by shepherds: it produces good effects in cases of insanity and of ischiadic affections.

⁴⁶ Abou-Aly-Hocein Ibn Sina, latiné Avicenna. Liber canonis, translatus a magistro gerhardo cremonensi ab arabico in latinum; folio, Mediolani, 1473; lib. ii, in vocem pæoniam. The Canon of Avicenna is divided into five books, wherein are treated, 1st, of the general principles of medicine; 2nd, of simple medicaments; 3rd, of diseases, "from the head to the foot;" 4th, of diseases generally and of "decoration;" and 5th, of medicinal compositions.

⁴⁷ Serapionis liber aggregatus in medicinis simplicibus, translatio Symonis Jannensis, interprete Abraham Judæo Tortuosensi de Arabico in Latinum; folio, Mediolani, 1478.

⁴⁸ Macer Floridus de Viribus Herbarum, curante Ludovico Choulant, 8vo, Lipsiæ, 1832, art. xlv, p. 94. This is a poem in heroic metres: it consists of 2289 verses, wherein seventy-seven plants, with their properties and applications, are not inelegantly described. Dr. Choulant shows that Macer Floridus is a more modern person than Æmilius Macer, who flourished at Rome in the early days, "*prioribus temporibus*," of the empire. In his "*Prolegomena ad Macrum*," the Editor gives philological notes on the plants; adds a list of the xxiii authors cited by Macer, and then concludes with a chronological description of the various editions—folio, Neapoli, 1477; quarto, Mediolani, 1482; quarto, Venetiis, 1506; octavo, Cadomi, 1509; octavo, Parisiis,

us,⁵² Isidore,⁵³ Otho,⁵⁴ Brassavola,⁵⁵ Dorsten,⁵⁶ Dodoëns,⁵⁷ Matthioli,⁵⁸ Baubin,⁵⁹ Ruelle,⁶⁰ Gerard,⁶¹ Parkinson,⁶² Fride-

1511; octavo, Basileæ, 1527; octavo, Cracoviæ, 1537; octavo, Friburgi, 1540; octavo, Basileæ, 1581; octavo, Hamburgi, 1590; and five others without date or place of printing, and twelve manuscripts of Macer's metrical pharmacology. Along with his Macer Floridus, Dr. Choulant gave an improved edition of Walafriid Strabo's work intitled *Hortulus Vernatissimus, carminis elegantia delectabilis*; 4to, Norimbergæ, 1512. Seven editions of Strabo's *Hortulus* were severally published afterwards, 12mo, Friburgi, 1530; 12mo, Parisiis, 1533 and 1571; folio, Venetiis, 1547, in the Aldine medical collection; 8vo, Francofurti, 1564; 4to, Ingolstadii, 1604; 8vo, Basileæ, 1627; and then came that of 1832, with Dr. C.'s prolegomena and notes. Strabo was born in the year 807; and, in after-life, he became a monk in the monastery of Fulda, where he distinguished himself by his numerous theological writings. His *Hortulus* is "non ignobile rei poeticæ et herbarie monumentum," consisting of 443 hexameter verses, with descriptions of twenty-three medicinal plants.

⁵² *Ægidii Corboliensis Carmina Medica, recensuit et illustravit Ludovicus Choulant*; 8vo, Lipsiæ, 1826; lib. i, v. 218; iii, v. 1154; iv, v. 609. The Opera *Ægidii* consist of three poems, *de Urinis*, *de Pulsibus*, and *de Compositis Medicaminibus*: the Editor prefixes admirable Prolegomena *de Ægidii Vita, operibus, et editionibus impressis*—quarto, Paduæ, 1484; quarto, Venetiis, 1494; octavo, Lugduni, 1605, 1615, 1526; octavo, Basileæ, 1529—with his reasons for undertaking a revision of the text. *Ægidius* prescribes the Pæony in composition with his "*Aurea antidotum*," his "*Opopyra*" or fire-juice, and his "*Triaca Magna*," as a certain remedy for epilepsy.

⁵³ John Cuba, M.D.—*Garten der Gesundheit* (the garden of health); folio, Moguntiæ, 1485. *Hortus Sanitatis*; folio, Moguntiæ, 1494. *De Herbis*; cap. cccxxxviii et cccxxxix. The Grete Herball; folio, London, 1516, cap. cccxxxviii.

⁵⁴ *Matthæi Sylvatici, medici de Salerno, Liber cibalis et medicinalis pandectarum, ex emendatione Angeli Catonis Supinatis de Benevento*; folio, Mantuæ, 1474; cap. 589. Sylvaticus treats of the pæony under the term *Penuser* vel *Pionia*, and he quotes Serapion, Avicenna, and Galen, as authorities for his representation of its virtues.

⁵⁵ John Platearius:—*De Simplici Medicinâ Liber*, inscriptus "*Circa Instans*," quo simplicia medicamenta usitatoria alphabeti serie describuntur; 4to, Lugduni, 1512. The compiler of "*Das Buch der Natur*," folio, Augustæ Vindelicorum, 1478, generally cites Platearius, Isidore, and Pliny, as the sources of his information.

⁵⁶ *Isidori Hispaliensis episcopi Etymologiarum libri 20*; folio, Augustæ Vindelicorum, 1472. In his fourth book, the bishop discusses questions "*de Medicinâ*," in the eleventh, he treats "*de Homine*," the seventeenth is occupied "*cum Auctoribus Rerum Rusticarum*," and the twentieth has "*de Mensis*" for its general title: the rest have less relation to subjects of botany or natural history. Chapter ix of Book xvii contains his observations "*de Herbis aromaticis*," and there he originates the mistake of ascribing the discovery of the pæony to Pæon the physician, using Homer's remarks in sanc-

ric,⁶³ Hunerwolff,⁶⁴ Blackwell,⁶⁵ and Haller,⁶⁶ heading the long train of simplers, herbalists and pharmacologists, extending down to dates of no very distant days.

tion of the statement. Isidore composed his "Etymologies" about the beginning of the seventh century.

⁶³ Otho Cremonensis is the author of a poem de Electione et Viribus Medicamentorum, in leonine verse. It was published several times, in connection with the *Schola Salernitana*, as 3vo, Francofurti, 1551, 1553, 1556, 1557, and 1559; 8vo, Parisiis, 1559. Dr. Choulant has appended it to his edition of Macer, in an enlarged and improved form: it extends to cccxxix verses, and, in the cxx, he says of the pæony, "Pulveris ignara, nigra, dura, pionia cara." The last piece in Dr. C.'s interesting volume, is a curious Greek poem, intitled ANGTMOZ NEPI BOTANON, edited, with the ancient scholia added, by Julius Sillig. Twelve plants are described, in 215 hexameter verses, and thirty-eight of these are devoted to the Pæony and its medical energies; p. 208, v. 139.

⁶⁴ Antonius Musa Brassavola.—Examen omnium Simplicium Medicamentorum; folio, Romæ, 1536; 8vo, Lugduni, 1537, 1544 et 1556; 8vo, Venetiis, 1538, 1539 et 1545; 4to, Basileæ, 1538; folio, Lugd. Batav., 1731. In his Bibliotheca Botanica, Linnæus mistakes this modern Italian botanist, for Antonius Musa, the physician of Augustus, and the subject of Horace's and Pliny's panegyric commemoration.

⁶⁵ Theodore Dorster;—Botanicon; continens Herbarum, aliorumque simplicium, quorum usus in medicinis est, descriptiones et icones; folio, Francofurti, 1540, p. 212. His phytography of the Pæony is comprehensive and extends beyond a mere transcript of preceding pharmacologists.

⁶⁶ Remberti Dodonæi Stirpium Historiæ pemptades sex, sive libri xxx; folio, Antverpiæ, 1603; pemp. ii, lib. i, cap. xxxii, p. 193; with four figures, representing the male and female plants. Lyte's "Nieve Herbal" is a translation of this work of Dodoens, and the pæony is described at page 237, with one figure in illustration.

⁶⁷ P. A. Matthioli.—Commentarii in sex libros Dioscoridis; folio, Venetiis, 1554. Compendium de Plantis omnibus, unâ cum earum iconibus, de quibus in Dioscoridem editis; 4to, Venetiis, 1571; lib. iii, p. 569, with figures of the male and female plant. Matthioli Opera Omnia; folio, Basileæ, 1674, p. 655, cum tribus figuris.

⁶⁸ Jöhr Bauhin:—Historia Plantarum Universalis, tribus tomis; folio, Ebroduni, 1651; tom. iii, p. 490, 494, quatuor iconibus. Dr. B. here furnishes an ample and amusing account of all the circumstances, actual or imaginary, having reference to his subject.

⁶⁹ Jean de la Ruelle, latiné Ruellius; De Naturâ Stirpium libri tres; folio, Parisiis, 1536; lib. iii, cap. lxx, p. 756. At pp. 18, 19, 20, 30, 35, 41, 45, 115, and 757, he records numerous important observations on the pæony and its parts.

⁷⁰ John Gerarde.—The Herbal or general Historie of Plants, enlarged and amended by Thomas Johnson; folio, London, 1633; book ii, chap. 380, p. 980, with eight figures.

Many are the terms by which the Pæony has been designated, in the course of ages, with reference to its floral characters or the qualities assigned to it as a medicinal element. Apuleius enumerates its appellations; : his list includes twelve constructed from the Greek language. With the Spanish herbalists, it bears the engaging name of *Rosa del Monte*, the mountain-rose: in other lands, it is distinguished by terms expressive of loveliness and beauty. Those phytophraphers err however, who represent for facts of history, that Pæon originally discovered this plant, and also employed it as the means of curing Pluto's wound. In some books, the Pæony is termed Ephithia in conformity with the alleged efficacy of its seeds in the treatment of *ἰφιάθη*, *incubus*, the night-mare: the estimate of its medical powers is comprehensive, and the outline of their applications includes a theme for philosophical reflection, enlivened with the glimmerings of superstitious and imaginant conceit.

** John Parkinson.—*Theatrum Botanicum*, or Theater of Plants; folio, London, 1640; tribe xv, chapter xxviii, p. 1379, with four figures.

** John Arnold Frideric.—*Disputatio de Pæoniâ*; 4to, Jenæ, 1670. Dr. F. was professor of botany in the university of Jena. In 1660, he visited Italy, England, Germany, and the Low Countries, in quest of useful knowledge: his death took place in 1672.

** J. Aug. Hunerwolf.—*Anatomia Pæoniæ*; 8vo, Arnstati, 1680. This is a practical essay, abounding with prescriptions, but deficient of natural history.

** E. Blackwell.—A curious Herball, containing cccc cuts of the most useful Plants used in the practice of Physick; two volumes, folio, London, 1739. On the sixty-fifth plate, the female pæony is represented, and the male appears on the two hundred and forty-fifth. Mrs. Eliz. Blackwell was the wife of a physician who had the misfortune to be an unsuccessful speculator in medicine, printing, and agriculture. She made the drawings from nature, etched them, and coloured the figures of the plants with her own hands.

** Albert Haller.—*Enumeratio methodica stirpium Helvetiæ indigenarum*; duobus tomis, folio, Gottingæ, 1742; tom. i, p. 310. Dr. H. produces a copious synonymous nomenclature, but his method does not admit of disquisitions on the qualities of herbs.

. From this copious list of naturalists, which might have been extended tenfold, there may be reasons deduced for inferring—that, during the long period of more than twenty centuries, the Pæony has enjoyed its present definite appellation; that many curious observations are intermingled with the histories of its characters and uses, whether salutary or superstitious, in the repositories of botanical and medical science; and that, were modern floriculturists to take this celebrated vegetable under their patronage, they would derive a pleasant and abundant recompense from the success of their efforts in augmenting the diversity of its beauties, and in promoting the improvement of its healing energies.

From the records of traditionary phytology, the admirers of mystic legends may learn that the Pæony was regarded, by the first races of men, as a divine plant, an emanation from the moon, a vegetable glow-worm sparkling amid the darkness of night, an elfin herb endowed with the power of expelling evil spirits, of averting storms, and of ensuring favourable harvests! Equally wonderful too were its medicinal virtues. Besides the inestimable property of cicatrizing the most deadly wounds, it cured epilepsy, convulsions, palsy, the bites of serpents, apoplexy, and indeed most of the nervous and spasmodic diseases! What pity, that the energies of this celestial remedy should nowadays be overlooked, out of a fashionable complaisance for chemical novelties!

Herbalists usually propose instructions for the preparation and use of two Pæonies—the male and female—with figures for illustration. Most parts of the plant have been medicinally prescribed, but the root, flower, and seed, are valued as the most efficient. From the “grete herball which gyveth parfyte knowledge and understandynge of all maner of herbes and theyr vertues,” we derive this information—“Peonie is an herbe the rote whereof is so called, and the rote is to be put in medycyne, yf peonie is found in receptes. It ought to be gadred in wynter, and may be kept x yeres, and it is to be chosen that is blacke and not perced. It hath vertue to deuyde and sprede humours. Agaynst the fallynge euyl it hath a specyally hydde or secrete vertue, as Galyē sheweth of a chylde that fel not as longe as it was hanged about his necke. But now we fynde not y^t it hath suche vertue, and therefore some say that it is but one spece or kynde of pæonie onely called Peonie Romaine.”

Lyte, in his “Nieve Herball,” ascribes a reasonable diversity of “Vertues” to the plant which “tooke his name first from that good old man Pæon, a very ancient physition, who first taught the knowledge of this herbe.” He applauds its marvellous efficacy in “appeasing paynes and tormentes” and hæmorrhagies, and then he proceeds to remark, that “the roote of Peonie dried, and the quantitie of a beane of the same dronken with meade called hydromel openeth the stopping of the liver and the kidneys, and sod with red wine it stoppeth a lossenesse. The roote of the male peonie hanged about the necke healeth the falling sicknesse especially in young children. Fiftene or sixtene of the blacke cornes or seedes dronkē in wine or meade is a speciall good remedie for them that are troubled with the night mare, and it is good against melancholique dreames.” “The kindes of Peonies,” he says, “are founde planted in the gardens of

this countrie." This observation was recorded in 1578; but, in 1562, according to Dr. Turner, "the femall peonye was comon thorow out all England and Germany; but the fairest yt he ever sawe was in Newberri, in a rych clothier's garden." From his own experience, Dr. Grew concluded that the inner kernel of the Peony possesses the power of determining very active aperient effects; but that, while it remains involved within its cortex, it is inert and has no operation. Now, if this conclusion were verified by repeated experiment, the fact would prove a valuable addition to the list of medicinal agents.

The story of Galen's epileptic boy attracted the attention of Dr. Turner; and, in the second part of his Herbal, he gives a version of the case, and confirms the value of the ancient prescription by the results of his own experience. "The roote of Peoni," quoth Galen, "hathe a drying poure, by reson whereof I wold not dout but yf it be hanged aboute childers necke it wold hele in them the fallynge siknes. I saw ones a boy delyuered viii monethes from the fallynge siknes by the hangyng of the roote about hys necke: and when, as by chance, it fell off he fell into the siknes agayne, and the same after the roote was hanged up agayn, he was well agayn. But I thought, for a surer tryall, to take the roote ones agayne, and as soon as I had takē y^e roote of agayn, he fell streyght way into hys olde siknes. But then I tooke a greate roote and tyed it tho y^e boyes neck agayn, and after that time he fell no more, but was quite delyuered of that sicknes." "Thys that Galene proued in one childe," Dr. Turner adds, "I haue proued in two childer, y^e one where of dwelled in London, and the other at Syon, my lord of Sommersette's house. But," he subjoins, "when as I proued the same in them that were of perfitt age, although it dyd muche good, yet it neuer wrought any suche effect in them as in the childe." Not a few names, and some of them illustrious, have suffered themselves to vouch for the accuracy of practical facts confirmatory of this piece of Galenian pathology; but, not unfairly, Dr. Caspar Hoffmann wishes to know whether Galen's peony performed the extraordinary feat from the virtue of its own nature, or whether it was conjured with magical influence; "for," he observes, "the devil helps or hinders Nature in many things." Even from the immortal Boerhaave, the physicians may accept this edifying intelligence. "The root of the peony," he states, "is hung about the necks of children to prevent an epilepsy, and the seeds are strung as beads to make a necklace for the same purpose. The male peony, in a more eminent manner, cures all sorts of convulsions, palsies,

tremblings, nocturnal frights of children, and apoplexies." Here, then, are the ancient and modern authorities for the famous "*Anodyne Necklace*,"⁶⁷ which, about the beginning of the last century, was vaunted as a remedy, altogether extraordinary, if not infallible, for a multitude of diseases.

AN ESSAY ON THE EXPEDIENCY AND MEANS OF ELEVATING THE PROFESSION OF THE EDU- CATOR IN THE ESTIMATION OF THE PUBLIC.*

CHAPTER II.

THE EDUCATION OF THE EDUCATOR.

THE legislature, to raise the profession of the educator above every other secular office, has yet one other grand and essential provision to fix and actuate its exalted duties—the education of the educator, without which national education, though divinely framed, would speedily become a dull and profitless formality. How few there are who have ever comprehended the character of an instructor and manager of children ! Of all difficult characters, the educator's seems the only impossible one. A man may, by labour and perseverance, attain the highest office, and exercise its duties with distinguished merit and ability ; but the character of a teacher of youth calls for such a rare and unexpected assemblage of virtues, such a profound intelligence, such an enlarged experience, and, above all, the genius to accommodate the sublime truths of the theory and practice of wisdom to the slender capacities of the young, that incredulity might be pardoned that turned hopelessly away from human imperfection, to relapse into the long-accustomed and dosing submission to " things as they are."

Whatever can be claimed for the character of a minister of the gospel, is not less necessary for the educator of youth ; and with

⁶⁷ Its nature and agency are explained in a tract bearing the title, "A Philosophical Essay upon Actions on Distant Objects," 8vo, London, 1715, with a title-page most portentous for its verbosity and pretensions.

* Continued from page 168.

the still further excellence of that peculiar adaptation of genius to the simplicity of the child, which is the most remarkable feature in the character of Christ, who, by one profound saying, "unless ye become as little children," explored the heights and depths of human perfectability. Without this excellence in the officer, the office will be collapsed, its duties inoperative, and the object of education utterly subverted. Primarily, the educator must become a government stipendiary: this law is inevitable, and, indeed, forms a part of the national education scheme. The appointments, in the first instance, must mainly depend upon the judgment and integrity of the minister of public instruction; for as teaching would form a part in the education of the educator, schoolmasters must be formed at once, though it would be scarcely possible to secure competent and well-instructed teachers in the commencement. Many failures and difficulties would hence arise in the interval between the establishment of the schools and the supply of masters educated expressly for them.

Untoward accidents, therefore, must be looked for, in setting the system to work; but these evils of inexperience will hereafter as certainly correct themselves. The educator must first be an appointed paid officer of government, responsible to the laws of his country for the right performance of his duties, not, as now, amenable to a private authority.

The Prussian law of national instruction of 1819 begins with this provision, 1st. "A suitable income for schoolmasters and mistresses, and a certain provision for them when they are past service": the first and the essential point. If you would have good masters, you must first of all ensure them a maintenance. The Prussian law expresses itself on this head in the most solemn manner. "It is our firm will," says the king, in whose name it speaks, "that in the maintenance of every school this be regarded as the most important object, and take precedence of all others." The amount of salaries (which must, of course, be regulated by the minister and inspectors), will depend upon the size of the school and the character of the master; but as no schoolmaster can be authorized without being well educated, there cannot be those great differences which now exist in the qualifications of masters: the income should, therefore, never be reduced to a bare maintenance, otherwise the master may be naturally expected to relax in his efforts, and so keep the school in the same unprolific and impoverished state. If the government should, by a pernicious grant, em-

barrass the progress of the national education plan, it will soon give proof of the impolicy.

A national education may be compared to a piece of mechanism : the embarrassment of any part of the structure will hamper the whole machine, and perplex all its movements. An incompetent salary will compel the educator to engage in some other occupation, which will necessarily secure his attention and interest, in proportion to his wants and the value of that occupation. The Prussian law suffers no schoolmaster to collect fees or gifts, whether in money or kind ; nor is he allowed to increase his income by any business which might lower his dignity or his morality, or divert his attention from his functions, &c. The school is the first consideration and care of the government, which, as it provides sufficiently for the wants and comforts of the master, can justly exact the whole of his time and ability to be used in the interest of the school. The allowance to infirm schoolmasters, which is also a provision in the Prussian law, completes the necessary requirements, and thus, as it were, buys the life-interest of the master, who purchases his dignity and support at the cost of his service to the state. The widows and children of masters are also provided for ; in fact, the law acts after the same manner as with many of the government offices in this country. The wretched support and want of remuneration which schoolmasters have ever met with, has been a principal cause of the degeneracy of the public mind.* This singular deficiency in the institutions of a moralized country, has not escaped the observation of many writers in past ages, who have loudly lamented the senselessness of a nation in thus giving birth to all the disorders in the state, both private and public, and which are yearly augmented. With the institution of national education, the first law must, therefore, concern the income of the educator ; and the next and not less important law is the *education* of the educator. As the former is a security to the educator, the latter is hostage from the educator to the state and to the people : the one law must be co-existent with the other. In the education of the educator, the question of the means

* "How can a man whose employment scarcely maintains him, think of anything worthy or generous ? How is he to inspire his pupils with sentiments which his pinching circumstances will not suffer to rise in his mind ? Ever anxious concerning his private economy, ever in dread of bankruptcy and poverty, how should he apply a due attention to what is sufficient alone to engage the *whole* man with the abilities of an angel, and undisturbed by every other solicitude ?"—Crito, *Essays on Various Subjects*.

first proposes itself, next, the manner or character of that education. The means of educating the educator is, by the institution of normal schools, after the manner of Germany, Prussia, or Holland, so far as may be consistent with the national character of this nation. The normal schools of Germany, Prussia, and Holland, are immediately under the controul and surveillance of government.* Although thirty years have not yet elapsed, there are now fifty normal schools in Prussia; and which supply teachers enough for the whole kingdom. To protect these schools from the officious interference of the public, the government raised them to the same privileges with the university; and they are inspected by the government authorities. The average number of scholars ranges between thirty and one hundred. The schools are situated in small towns or villages, as it was deemed imprudent to place students in the neighbourhood of cities and large towns, where they might be tempted by pleasures and allurements. Having acquired the necessary education in the elementary or burgher school, the candidates for the normal schools are examined by the committee, or school inspector, as to their fitness. The first year is devoted to supplemental instruction; the second year, to specific and more elevated studies; and the third year, to practising the art of teaching the elementary schools. The law permits both clergymen and schoolmasters to receive and train private pupils for the profession of the educator.

The Prussian government has also acted with great delicacy towards private schools, such as endowed schools and the schools of particular sects, as the Jews; at the same time, it has retained over all an authority conservative of the principle of a national education. In the election of masters in either of the above-named schools, the right is equally divided between the patrons or trustees and the government inspectors, thereby preventing the employment of men ill adapted for the office of teaching: all disputes are referred to the minister. The funds of the normal schools are supplied by the state and departmental fund. The question of the policy of an education tax has been agitated, with various success, by different persons. In an admirable paper in the second publication

* The name of Pestalozzi is engraven on the corner-stone of the first normal school established in Prussia. From the silent and unassisted efforts of that truly wonderful and excellent being, rose a system that will one day pervade every civilized portion of the globe, and by its means re-construct the mind and character of nations.

of the Central Society of Education, the writer remarks, "Of all persons, those are most opposed to the education and moral elevation of the humble classes who are but one step above them, and we much fear it will be a long time before the mass of the rate-payers in the country (and the power would be in their hands, notwithstanding the educational qualification) will consent to grant rates for the education of the peasantry. Of the town councils we might, perhaps, expect better things. In the country, it would be difficult to say where the power could be safely lodged; but it is urged, if these local authorities will not agree to educate the working classes, the government has no business to interfere. This is, however, a very questionable doctrine. If the individuals refusing to act were the only parties concerned, there might be some reason in the argument. Such, however, is not the case; it is one class dictating with regard to another—it is the case of the small farmers and small shop-keepers, determining with regard to the class immediately below them."* It may appear something too arrogant to say that this alarm is unprovoked by any analogous precedent. It is surprising how smoothly a new law will sink into operation, even though it stirred up a little troubled action in the beginning. The once dreadful law of conscription (in France), which threw its terrible complexion over the minds of distant nations, is now contemplated as a national palladium; every innovation, in fact, must be attended with some partial reluctance, the burden must be grievous indeed that is at once kicked off. There can be no national education without a national assessment, and to that assessment the nation will easily submit; or, if any disapprobation be expressed, it will be only so long as the bill is in suspense. National education is not to be treated like any other government measure; it will not admit of the expedencies and excisions to which a poor law enactment, a factory or a reform bill, may submit; there can be no infringement upon the collective principles of a national education, or it will never thrive. The people, in this instance, have clearly no right of appeal; for as the want and the supply must be co-existent and co-extensive, the popular objection presents the strongest argument both of their ignorance, and, therefore, the want of such a supply. It has been too evident what sort of national education is procured by private interference and public solicitude—a degraded and abject profession, bad masters, bad schools, bad scholars, ending in a bad people; and yet the legislature, and even learned educationists, dispute about

this or that expediency, or if the people will or will not submit to school obligation or a school assessment ; certainly they will not, or there would be very little need of national schools at all, To lower the scheme of a national education to the dispositions of an ignorant people, is like the physician signing a treaty of peace with the distemper, allowing one part to remain in order to remove the other part.

The expence of the primary normal schools in Prussia is nearly twenty thousand pounds yearly, no more than is now wasted by government in nourishing the gaunt forms of the Lancaster and Bell schools. The normal schools in Holland present some differences, but are, perhaps, better regulated than those of Germany and Prussia ; this is, in a great measure, owing to the indefatigable exertions and genius of the " general inspector of primary instruction," M. Vanden Ende, and his coadjutors. In the primary school of Haarlem, the scholars are not boarded, as in those of Germany and Prussia, but each receives a salary from the crown, and provides for himself. In the town, their conduct is not only watched by the masters, but by the police ; and the family with whom they lodge are, in some measure, responsible for their good behaviour. These families are always selected by the inspectors, and they regard it as highly honourable to receive a pupil of the national school. A probation of three months determines the admission of every pupil into the school, and even the slightest moral inaptitude or defection is enough to reject them. The period of their education in those schools is four years. A large portion of this time is devoted to the " art of teaching ;" the number of children (2,300) in the primary schools of Haarlem, furnishes ample means of acquiring this essential part of their education. The discipline of the normal schools is admirably adapted to form good and efficient teachers. In the first place, the scholars enter the school voluntarily, for the sake of perfecting themselves in a profession which they purpose to follow, and which, consequently, is the great business of their lives. They are themselves inclined to order, and have no need of the discipline of a boarding school. Every pupil is (to use the expression) under the discipline of the moral dispositions which he has brought with him to the school ; those who have not those dispositions, or do not manifest their existence during the first three months, are sent away. Those who pass the period of probation know perfectly well that the least fault will be severely visited, that they depend entirely upon the director, and that their dismissal would be caused by the slightest disapprobation expressed by him. They are forbidden

to frequent any place of public resort. If they are seen in a public house they are subjected to a severe reprimand, and for the second offence are dismissed. They cannot absent themselves from the town for a single night without the permission of the director. They do not choose their own lodging, the director does this for them; he even pays for their board. The families who receive these scholars as boarders are themselves interested in entering into the views of the director. It is an honour and a profit for a family of small fortune to be made choice of for receiving the pupils of the normal school: on the slightest suspicion the scholars are taken away. The scholars are not considered, in the house in which they inhabit, as strangers, but as members of the family; submitted to all its rules and customs, it is the business of the family always to know where the boarders are at every hour of the day. The director visits these houses every fifteen days at least. He is in communication with the police, who never fail to give him full information of all that falls within their observation. In speaking of the working of his own school, M. Prinsen said, "Yes, with a safe conscience, I declare that in this school every thing goes on generally well; and that the examples of disorders are so rare that they cannot be considered as resulting from the system." The reasons of preference given by M. Prinsen for out-boarding the normal scholars are conclusive as far as Holland is concerned, and with such masters as M. Prinsen; how far it could be adopted in England and France is a matter of doubt. "You say," said they to me, "that the boarding school, with its severe discipline, is a better preparation for the life of a schoolmaster; on the contrary, we are convinced that a young man who has passed several years in a normal school of boarders is extremely embarrassed when he leaves it and becomes sole director of his own actions; whereas, in our system, a young man learns to conduct himself, to deal with mankind, and the life which he leads is an apprenticeship for the life which he is about to enter upon."* This would, probably, be the best plan in small towns and villages; but in the large cities in this country it would be a dangerous experiment. The colleges of the dissenters or *ecclesiastical normal schools*, in this country, are by far the best regulated institutions of any that exist here; their experience and plans might be beneficially consulted in the forming national normal schools.

* This account of the primary normal school at Haarlem is chiefly taken from the second publication of the Central Society of Education, p. 127, &c.
VOL. X., NO. XXX.

The salary of M. Prinsen, one of the first masters in Holland, is 1,600 florins (£.134) per annum. To set this side by side with the enormous income of the ill-taught masters of many of the endowed schools in this country, and, if it were possible, the value and result of the services of the two, the comparison might appear preposterous and impossible. Normal schools in this country must be established on the most liberal principle. It may be a question if masters might not at first be sent to the Prussian normal or Dutch schools for two or three years, and thereby save the long arduous struggle with those difficulties which otherwise can be learned only by experience. The normal school of one country is as good a *dépôt* for the material in the art of teaching as any other, and might thus save all the labour of seeking for the best masters to start with, that, however good, must, from the nature of things, be very defective in the proper and genuine skill of the pedagogic art. The employment of a few of the masters from the foreign normal schools would be a great assistance, and necessary in the onset, if the education of the English in Prussia were deemed inexpedient.

The particular education of the educator forms the last and crowning obligation in the scheme of a national education. The importance of educating the educator is one of those trite and self-evident truisms which every body is thought to accede to and understand; yet, of all truths, that not one is less comprehended, is plainly shown, both by a personal and national application. The education of the educator involves no less than the religious, moral, intellectual, and physical character of man. To direct his faculties without embarrassing his reason, to amplify his self-love into universal philanthropy, to consolidate his affections into a profound contemplation and reverence of God; to teach this stupendous lesson to man, may seem to require the powers of a higher and spiritual intelligence, but happily illustrious examples among men are not wanting to encourage the fainting hopes of the timid. It is well that the standard of human excellence should be elevated; human imperfections and weakness may soon bring it low enough. "Education is to repair the ruin of our first parents." How inconceivably sublime does education appear, when represented in its own nature and purpose! The mere arithmetician, the classical scholar, or the political economist, may deprecate the epidemical contagion of such Utopian visions; but those most learned and conversant with the subject, both of times past and present, are all singularly practical in their dreams of educational reform. "The most immediate

and the most important aim of all instruction," says M. Cousin, "is to train up and complete the man, to ennoble his heart and character, to awaken the energies of his soul, and to render him, not only disposed, but able to fulfil his duties. In this view alone can knowledge and talents profit a man, otherwise instruction, working upon sterile memory and talents purely mechanical, can be of no high utility. In order that the teacher, and particularly the master of the primary school, may make his pupils virtuous and enlightened men, it is necessary he should be so himself. Thus, that the education of a normal school, essentially practical, may completely succeed, the young candidate must possess nobleness and purity of character, in the highest possible degree, the love of the true and beautiful, an active, penetrating mind, the utmost precision and clearness in narration and style." To accomplish this great object, what is the course of education first to be pursued?—the education of the educator. The detail of the education of schoolmasters must be classed under the following heads: 1st. Physical; 2nd. Religious and moral; 3rd. Intellectual (general); 4th. Professional (personal).

The *Physical Education* is, of course, placed first, because, without a bodily capacity and power, the master would be unfitted to fill the office of a teacher. Presuming the candidates are healthful at the time of their presentation, it becomes further important that each should receive a certificate of the physical condition and character of the parents and brothers and sisters, stating if subject to any hereditary disease, as consumption, asthma, insanity, gout, &c.; and if the family disease has been confined to the parents or extended to the children; also the general sanity of the candidates, so that they shall not get themselves *pretty well up into condition* for the occasion, and perhaps ever after lead a sickly feeble life; for of all labours there is not one which calls for more vigour of body than the labour of teaching, and is, moreover, so essential to the success of the scholars—for, whatever may be the cause, if the school discipline is not vigorously and vividly sustained, the scholars will soon relax into the dull sleepy pace of the master. The candidates should be sound in body and mind; and any deception that is after proved to have been exercised at their admission relative to this point, should be punished by sudden expulsion. Active health, a quickness of the senses, particularly of the eye, and a readiness of speech—not only no hesitation or stuttering, but an easy and fluent manner of expression—are absolutely necessary to the character of a good master. With good health comes cheerfulness,

the temper rises or falls with the pulse ; and the master who would feel with a child must feel as a child. Children are ready reckoners of the face, and a gloomy look, or an irritable mood, will in an instant break up their sports and gambols. Cheerfulness, though chiefly constitutional, is to be acquired by habit. Of course, this habit belongs to the moral training rather than to the physical organization ; but, whatever be the moral training, it is utterly impossible to feel and exhibit a cheerful temper with bodily infirmities. The sanitary condition of the scholars must be continually watched ; their relaxations should not be moralised too much.—It is desirable to train up a man, not only in the simplicity, but in the gaiety and vivacity of a youth. Speusippus, it is said, hung pictures of joy and gladness in the schools, meaning that education should be made a subject of pleasure. The moral certainly was directed more to the master than the scholars ; for could there be so bitter a satire as a picture of joy and gladness, with a living original of sadness and severity ? A cheerful teacher is the best picture to lighten the heart of a scholar. The usual amusements of the age should not, therefore, be laid aside for the enforced and formal practice of mere gymnastic exercises. The advanced age of the normal scholars, and the dignity and importance of their station and pursuits, may be apt to throw them into a sombre and grave state of mind, unless checked by those vivacious, yet manly sports and games, that contain just enough of emulation to keep up the interest. A periodical medical inspection of the sanitary state of the scholars would be advisable. The living should be plain, but as variable as convenient ; and the hours of meals regular and suited to their age. One thing the writer deems essential to their health and good morals—a total abstinence from all fermented drinks, wines, spirits, &c. Organic diseases, or, what is worse, permanent functional derangement, is chiefly brought on by the long insensible effects of stimulating drinks. As there is no rule so essential to health as temperance in all things, so there is no rule so essential to comfort and cheerfulness as exercise. Sound bodily and mental health are, therefore, the primary consideration in the choice and education of a normal scholar. But bodily health is the means, not the end ; it stands first in the order, but not in the dignity, of education.

Religious and Moral.—Though, strictly speaking, the moral is comprehended in the religious training, it might lead to some confusion to exclude the word *moral*, which, indeed, may be distinguished as the antecedent of religion, rather than religion itself.

The moral training must be supposed to have advanced and consolidated into a habit in the normal scholars, who will, of course, have received a primary education in the elementary schools. Through the moral inclinations to lead the mind to the consideration of religious truth, will be the fruition of moral training. But the *affections*, in their nurture and direction, also belong to the moral training, and constitute the principal feature in the character of a good master. Religion, even in its humility, is often severe; the very abasement of the soul before the tribunal of its own thoughts is apt to beget, in many persons, a grave austerity of manner, and, as far as man is concerned, a selfish isolation from the fellowship and sympathy of man—an anchoritish and ascetic disposition, that would be fatally prejudicial to the character of a teacher of youth. The nurture of the affections, or the moral training of the heart, is the chief part in the great business of education, and must be well understood, and deeply felt in the hearts of those who are to direct the dispositions and conduct of future generations. The partial loss, or rather induration, of the affections, in the progress from childhood to adult age, seems a natural change, adapted to the altered circumstances of mankind. However this may be, it forms no necessity in the life of an educator; the more of the childish simplicity and tenderness that can be retained, the better is he adapted for his duties; and, without this endowment of the heart, no practice of patience, no self-government, can fit him for the singular and exalted office of an educator.

One of the lessons taught by a selfish and sophisticated society, is indifference and insensibility: the heart is as a broken cistern, the spring of the affections are dried up, and the poison of asps is under the tongue. By this hardening of the heart, religion is robbed of its devotion and nature of its charms. It is the duty of the educator to work against this moral insanity; to raise up a new generation into a newness of heart; to go forth in their strength to contend against the giant-grown prejudices of past ages. To do this, the educator will require a love that hath no horizon; for no stretch of intelligence can of itself sustain the spirit under the burden of teaching. Without this exhaustless compassion, schoolmasters are but necessary evils. That ever-exercised critical discernment, which shall see through the intricacies and differences of the human mind, can be kept in flame only by the breadth of the affections, the pity of an unfathomable love. "The most important qualification required on his (Pestalozzi's) part was an accurate and comprehensive knowledge of human na-

ture, and of the laws by which it is governed, both in its internal development, and in its intercourse with the world." This passion of love is the spirit that moves and breaths over the incongruous elements of the human soul, imbuing them with its own essence into a joint affinity and concord. Love is the actuating element of religion. National schools cannot be the asylums of sectarianism or superstitions; but schoolmasters should be profoundly and impressively religious, transfusing into every heart a spirit and principle of devotion. "Man," says Harrington, "may rather be defined a religious than a rational character, in regard that in other creatures there may be something of reason, but there is nothing of religion."* To educate a man without religion is to withhold the title of his supremacy, and to degrade him to the nature of a mere rational animal. If philosophy be commensurate with time, religion exceeds time itself, and is, therefore, the only object competent to hope. Thus education, to be secure, must be based upon religion and morality; without their influence no success can be looked for, no national reformation in manners, no enlarged intelligence. "Religion is, in my eyes, the best, perhaps the only basis, of popular education. I know something of Europe, and never have I seen good schools where the spirit of christian charity is wanting. Primary instruction flourishes in three countries, Holland, Scotland, and Germany; in all, it is profoundly religious."† To lay down rules for the teaching of religion and morality would be uncalled for, and perhaps impossible, beyond those general principles which are obvious to every one. It is sufficient to know that religion cannot be taught by catechisms, nor morality by the rod, but must be communicated by the insensible operation of good impressions and cherished affections. The science of theology is the work of a maturer age. The teaching of religion and morals, in the normal school of Prussia, is very effective, including in the religious such instruction as is called for by a christian people, at the same time preserving to every individual their religious privileges. Thus, every pupil is expected to attend some place of worship; but no interference is used in the *choice*, which is left to the will of the scholars. In a christian country, such a rule is essential; for without the form and ceremonies of worship, religion would soon sink into a cold morality and caprice of feeling. The reading the New

* "We know, and it is our pride to know, that man is by his constitution a religious animal."—Buck's *Reflections*.

† Cousin's *Report*.

Testament, especially the Gospels, and by a judicious extemporaneous commentary upon the sublime morality and divine character of Christ—thereby leading the mind to a further examination of the truth—must necessarily be a prominent duty of the educator. Ecclesiastical history should be read and explained, and thereby the evils of bigotry and intolerance might be put in contrast with the principles of pure religion. But, whatever be the theological teaching, *opinions* should be carefully avoided, lest the scholars should acquire a disputatious and angry temper, that is little profitable either to religion or morality. The morality of the New Testament is the seal of every other impression ; morality in theory, therefore, is to be taught from its unsullied streams, and, with every instance in profane history, should be held up as the immutable referee of every principle of human conduct. After this manner should general literature and history be read ; for what is the purpose of history, if it be not to direct future generations in the course of virtue by an appeal to the life and experience of past ages ? Without this application, history is comparatively useless. To place in opposition with the conduct and precepts of the Exemplar of Mankind, the history of the wicked and the good, would be giving a striking prominence to virtue and vice ; in the contrast, human excellencies would be found impure, and those long-lauded virtues of heroic song that, Phaon-like, have concealed their natural ugliness under celestial charms, would be abhorred as exaggerated crimes. The murderers of classic history would no longer be mistaken for heroes, to the great bane of young and misguided youth. The subjects of philosophy and poetry would be cast into the contrast, and prove the essential moral and intellectual nature of each. The morality of the reader is the best censor of men and books, and will be sealed, not only in the title-page, but in every leaf and on every action of the author. To elevate the heart, and attune the feelings of the scholars to the “ Author of all Good,” is a part of the normal school discipline.

Music should, as in Prussia, form an essential part of the daily devotion. There is no accomplishment that would tend so much to the religious and moral improvement of this nation as a general cultivation and acquaintance with music. The English, more than any other people, are admirably constituted to be benefited by music ; for whereas other nations have arrived at a considerable perfection in this science, the English are comparatively strangers to it, and yet are particularly adapted, both by their devotional and reflective character, to enjoy music, not as a mere sensualism, but as

an intellectual thinking relation. The Prussian law makes it imperative that music should not only be taught to every scholar, but in every normal school is an organ, which is played at the morning and evening services. Religion is thus made (if it may be so expressed) a sensual pleasure, in keeping the soul and the affections in a state of mutual activity. A common participation in the same pleasure must have a beneficial effect, even upon their conduct to each other, and will strengthen that amonity and kindness which should distinguish them individually. A kind and affable conduct to each other is of vital importance in a normal school ; it is, in fact, the practice of their character as schoolmasters. A rugged, cross, or irritable temper, is, therefore, utterly incompatible with the character of a scholar of a normal school : one ill-tempered youth is enough to disturb the serenity of a whole school. The natural temper and early training of the scholars is a matter of the first importance in their admission to the normal school, or there can be no dependence upon that general peace and cheerfulness of mind that should prevail in such a school. Among other necessary rules of good morals, cleanliness and order should not be left to the mere chance of inclination. These are little matters that point to great results, and help to form that business-like habit which a diligent and conscientious master should possess.

Intellectual or Mental Training.—A good elementary education of the candidate for a normal school must, of course, be imperative ; for it is not the business of a normal school to teach the elements of knowledge, but rather to perfect knowledge, and to acquire moral and professional training. Without a strict requirement as to the elementary education, much time would be lost, at the expense of the office. One bad and inefficient schoolmaster is more hurtful to society than a hundred ill-educated people ; for he misgoverns and vitiates the whole school for perhaps half a century. It is vitally important that the early education should be good and complete with those who would become inmates of a normal school ; if it be otherwise, it will become a mere asylum for indigency, and encourage every parent who has a sickly and silly son to make a schoolmaster of him. The primary education should, therefore, be sound and competent. The studies in the normal schools will be to realize what has already been learned, and to explain to the understanding what has been held in the memory. Thus, the rules of grammar should be explained by frequent and familiar examples, either in reading, writing, or speaking, making it an incidental rather than an isolated study. To read, write, and speak with per-

spicuity and elegance, is the object of grammar ; but this facility can be gained only by constant practice in the use of words. A verbal affluence will never be gained by rules of syntax or prosody ; speaking and writing must be long practised to become a property of easiness. To speak with ease and readiness is a most important accomplishment in a schoolmaster. What a quiet and graceful carriage is to the body, a smoothness of speech is to the mind, and infers a strength and harmony of the mental faculties that is highly favourable to the self-assurance and authority of a master. The practice of speaking on subjects of morality, literature, and scholastic points, before the whole school, would be highly beneficial. Short extemporaneous opinions and criticisms while reading in class, the writing of theses on various subjects, and a weekly periodical school-meeting, for the examination and discussion of such productions, would not only prompt the faculty of language, but would beget a spirit of emulation most advantageous to the progress of the scholars. The study of the classics and modern languages could not be generally recommended, but should be confined to the inclination and abilities of the pupil. It may be a question if the languages should not be reserved for one class of schools. The colleges, universities, and grammar schools, are, perhaps, sufficient to teach the classics to those whose circumstances and rank in life makes them independent of any kind of business : in the normal schools the classics should be kept in due restriction. A knowledge of the classics is very important to those whom fortune has placed in an independent state. The study of those ancient languages disciplines and refines the mind, and tends to impress most forcibly elevated thoughts and feelings in the spirit of youth. Even to professional men, a knowledge of Latin and Greek is very advisable ; for as the vast and increasing vocabulary of the sciences is derived from those tongues, without a tolerable knowledge of them the memory must be on the constant stretch to remember and distinguish the various terms, unavoidably occupying the mind with mere words, at a time when it should be left free to the consideration of the facts of science.

The study of the languages cannot be too much recommended, so that other and more necessary knowledge be not displaced. Even the predilection for the dead languages is innocent enough, if a national education gave to *all* the facility of acquiring them. The reverence in which they have been too long held is one of the prejudices of the "good old days," when learning was too uncommon not to be exclusive ; extend the suffrage, and the evil will be done

away. The study of common arithmetic will be essential to every scholar; also mental and slate calculation. The mathematics will necessarily form a part of the school plan, but always bearing a reference to the disposition and future locality of the pupil, whether in town or country. Drawing and perspective are highly useful, and in some degree necessary, to an educator, and will do much to assist him in the illustrative parts of teaching. A knowledge of history and geography, especially that of Great Britain, is essentially necessary, and might be studied together with a mutual advantage. The study of natural philosophy will, of course, form a part of the national education, and therefore of the normal schools.

Though the Prussian and German laws are very careful of the health of the scholars and masters, there appears to be a deficiency in the knowledge of physiology. It is not enough that anatomy in theory should be slightly taught; the great principles of organic life should be explained, and illustrated, as far as possible, by living examples. The nature and cause of disease should be made known; the action of different kinds of aliment on the body, the progress of growth, maturity, and decay; the nature of the muscles, nerves, and blood-vessels, and their intimate sympathies with the brain and mind. A man should, of all things, learn to understand himself, to control his appetites, for the highest of all reasons—his interest. He should understand the animal economy, and the relations of every law or function of life. A knowledge of himself, of his physical being, is a wisdom full of safety. Every man who is to become the guardian of youth should be imperatively and religiously taught somewhat of the science of physiology. The study of the sciences—as botany, geology, mineralogy, natural history—should be kept up as far as possible, without injury to the primary object of the school—the pædagogic art. The system in normal schools should be modified according to the locality and purposes of each. Urban normal schools should be suitable to the training of masters for the urban primary national schools, where, for the most part, would be taught the children of tradesmen, mechanics, and artisans; those, in fact, who in after life are to be employed in the arts and manufactures. In rural normal schools agriculture as a science (both in theory and practice) should be a principal study. The benefit of agricultural schools, both to the scholars and to the public, is eminently shown in the school of M. de Fellenberg, at Hofwyl.* Not only are the higher studies made

* The complete success of M. de Fellenberg's school at Hofwyl is now generally admitted. While the course of study is more complete than in

a part of the plan of education at Hofwyl, but are joined to the practical manual labour of agriculture, and so successfully that the pecuniary resources of the institution are daily increasing from the actual labours of the scholars; while most important discoveries in agriculture are the frequent result of their experimenting.

The obstinate prejudices of farmers in this country is proverbial; it is a frequent case that new and important improvements in the economy of money and labour are rejected by the farmer, whose only excuse for retaining the old method is that "his father did it before him:" this usually settles all controversy and conviction. Agriculture should, therefore, form a principal study in the rural normal schools; for however slow the progress of discovery, the mind would at least acquire a susceptibility for experiment. The few industrial schools now in operation in this country, form no bad epitome of what a normal industrial school ought to be. Nothing would more tend to augment the resources of the farmer and the labourer than a theoretical and practical study of the science of agriculture. Among other studies in the normal school, general literature should not be altogether neglected. An acquaintance with the writings of good and learned men would quicken the intellectual dispositions of the scholar, and check the mere utilitarian spirit which a rigid school discipline, and a formal practical habit of teaching, might beget. It should never be forgotten that the schoolmaster is not educated for himself, but for the public; all that he acquires is in lease, to revert with interest to the nation.

any schools in this country, manual labour in the field is daily carried on, not in a dull clownish way, but as practical experimentalists. Their whole life is a study, whether in the school-room or in the fields. "For instance, when the boys are employed in digging trenches to irrigate a meadow, and while directing the water along artificial meadows and round hills, so as to regulate the fall and distribute the moisture equally, they put each other in mind of what they have heard about the laws of hydraulics. When they clean a field of the stones turned up by the plough, and are directed to separate those which are calcareous, in order to be burned into lime, they *know* and *practice* the different tests by which their nature is ascertained, and can point out in the horizon the particular mountains which have furnished these various fragments." With all this attention to the rationale of their labours, the profit and loss is so nicely balanced that the farm (according to Mr. Curd, one of the commissioners appointed by the Swiss Diet to inquire into the agricultural establishment at Hofwyl) yields something more than 8½ per cent. interest, net of all charges. The reader will find a very interesting account of this establishment in the thirty-second volume of the *Edinburgh Review*. See also an account of the school of Lastidie, Cousin's *Report*, p. 171.

To excite the minds of the people to the exhaustless and refined pleasurable sensualism of literature, is a great object in national education ; to effect this, mere elementary studies must be lightened by works of imagination and taste. Next to religion, a book is the light of the poor man's house, the source of true independence and happiness of mind. A schoolmaster should, therefore, know how to mix together profit and delight, by a seasonable interchange of the duties and pleasures of learning.

The science of teaching, or *Professional Education*, is the ultimate object of normal schools. This study is of three kinds—the science of education or training ; the art of teaching ; and the theory or science of methods : distinguished in Germany by the terms *pædagogik*, *didaktik*, and *methodik*. The science of teaching is to be acquired by oral instruction, reading works on the subject of education, and, lastly, by teaching. When it is remembered that the object of normal schools is to send forth men as models and teachers of intelligence and goodness, through them to act upon the collective mind of a people, converting them into their own image and resemblance—a nation of masters and teachers—it will be readily conceived what kind of education an instructor should receive. The power of an educator does not rest in knowledge, however profound, nor in holiness of character, however exalted, but in the combination of knowledge and holiness, superadded to the faculty of governing and instructing the minds of youth. Lectures on *pædagogik*, though necessarily forming a part of the science of educating, and works on education, though equally useful to sustain the vitality of the whole educative duties, are but means collateral to the great end of education. It is in the practice of teaching that the mystery lies, and to which the whole force and energy of the mind should be directed. The theory of educating is a fascinating study, connected as it is with so much that is dignified in purpose, and sublime in its future results. But, however truly described, the theory of education and the practice of teaching are strikingly dissimilar ; the exhausting monotonous labour, the discouragements and the failures of teaching, can be estimated only by a personal experience. To give up the refined pleasures of literature and science at an age when the mind is so far advanced in its acquirements as to feel no pain in the pursuit, and to retrace with wearied and incessant steps the same dull round of elementary knowledge ; to induce the dulness of some minds, and the pertinacity of others ; to correct the capricious dispositions and follies of childhood ; to inculcate and confirm principles of justice and mercy ; and after years of

toil, when the scholar has arrived at an age to appreciate these extraordinary efforts, and to manifest the first feelings of companionship, of gratitude, and love, to be taken away, and his place supplied by childhood, again to trace the same laborious ascent; is a sacrifice that can neither be estimated nor borne, but by those who have been trained by an early and long unbroken practice, and who are actuated by a religious sense of the responsibility of the office. But the duties of a teacher are too much for the individual, without the aid and encouragement of the legislature. Every normal school must have an elementary school attached, or in its vicinity: there the scholars must put in practice the theory they have learned; there they will not only gain a readiness in the art of communicating knowledge, but it will be a suitable school for the trial of their moral fortitude and affections. Uncorrupted by worldly influence and example, they will have to sustain no self-contentions with bad feelings and passions; every day will add to their knowledge and self-confidence; and while they will be enabled to contemplate in their future lives no harder task, their whole intellectual and moral being will be given unreservedly to the work.

The art of teaching will include not only a ready facility in communicating knowledge, but what is the best method (*methodik*) to be adopted in each study, and if one plan be better suited to the comprehension of the learner than another. The elementary pupil is to the normal scholar what the normal scholar is to the normal master; and all that he has to do is to transfer the advantages of his education to his pupil. That the scholars may be diligent in business, their energies should be prompted by the occasional presence of the inspector or members of the committee, and his ability as a teacher should be examined at stated times by a practical trial with the class. The normal scholars must be well instructed in the exercise of authority (*governing*); as inexperienced youths, they may at first carry their power a little too far, may forget the disparity of age, and feel impatient of the dullness of their pupils. This must be carefully checked, and will require no little attention on the part of the over-master; for occasional impatience will soon degenerate into habitual severity. They should be incessantly observant of the moral character and dispositions of the children they teach, that they may gain a quick perception of the differences in the mental apprehension and tempers, and thereby be the better enabled to adapt themselves to those differences, acquiring that easy

pliability of mind which is so admirable a faculty in a teacher. They should connect with the practice the theory of moral philosophy ; the mental faculties should be well understood, connecting this abstract reasoning with the facts of physiology, so that, as far as possible, to reconcile and explain those discrepancies of character which are presented, not only in different persons, but in each individual. This knowledge should naturally lead to a consideration of the nature of law and government of that invisible and irresistible power which, in acting, takes away the very will of resistance in minds preconfigured to its influences. " We can be subdued (says the philosopher) by that alone which is analogous in kind to that by which we subdue ; it is the unconquerable law and basis of the will of the wise man, that a ' soft answer turneth away wrath : ' a faculty is appealed to in the moral being, which answers to that appeal before the mind is capable of consideration, the natural law of love associated with, and acting spontaneously with, the law of reason." This moral virtue should be the only and adequate coercion of an educator ; for " whips are not the cords of a man : human nature may be driven by them, but it must be *led* by sweeter and gentler ways." Let the young teachers be led to contemplate the characters of those good and illustrious men who have preceded them in the same office, and dignified it by their life and conduct ; let them be encouraged to aspire to the same excellence of character ; let them be taught to look upon their professions as transcendent in dignity, but awful in its responsibility ; and, finally, let them be instructed how personally to maintain the dignity and spirit of their office.

If the legislature and the nation dignify the office of the educator, it is his duty and interest personally to sustain and elevate that dignity. To attain this all-important end, the master should constantly bring before the mind of the young teachers the ultimate object of their labours. The more importance is attached to an object, the less danger is there of regarding it with indifference. Whatever is momentous must be interesting ; and what can be so momentous, next to the purpose of religion, as the restoration of the buried intellect of a people to the life and fruition of intelligence and virtue ? To aid this impression effectually, lectures should be given at least once every week, on the nature and duties of the offices ; and school conferences should be formed to keep alive these dispositions, and to prompt their individual interest in the best means to be adopted both in moral training and teaching.

At these school conferences, *written theses* should be read, after the same manner as at the conferences of the masters in Prussia.* Clergymen should make it a part of their duty, not only to inspect the state of the schools, but should publicly exhort both the masters and the scholars to the just fulfilment of their duties. These exhortations should be directed also to the people, that the spirit and dignity of the office might be sustained, and that they might mutually co-operate in the great work of education.

The interest of the individual should be so completely lost in that of the office, that every assistance and improvement may be freely communicated to all. Every thing they read, whether historical or literary, should be conducive to the all-important purpose of their office. If history be read, what can be a more powerful appeal to their sympathies and exertions? A succession of intrigues and crimes, of private feuds, factional animosities, and popular riots, and under all the poisonous fen of misery and vice, ignorance engendering error, and error superstition and tyranny, nourished with the blood of millions of human beings—can the spirit of the office derive no validity, no value from such reflections? If subjects of general literature be read, what can be a more effective stimulus to enthusiastic ardour of mind than the sublime truths of religion and philosophy, like the twin stars of the zodiac, transfusing their brightness into each other, into one unquenchable light; or what sensuality can compare with the pleasures of the mind, and the discursive activity of its faculties? Can they fail, by this reference to their own advantages and refined enjoyments, to contemplate the glory of their office, the infinite good it is their privilege to effect, in communicating the happiness they feel through their exertions to arouse the sleeping energies of a nation into an activity of intellect and goodness? They will compare the sad history of the past with the hopes and promises of the future; and while imagination expands the views, reason will assure its reality by the soundest principles of induction and experience. Superadded to all this, the minister of public instruction must require (as in Prussia) a yearly report of the state of the normal schools: without that liability, it is to be feared that many might degenerate into abuse, and the most rigid discipline fall to a mere lax formula. This report, sent in by the schoolmaster through the inspector or committee, should include both scholastic and domestic affairs, the order, discipline, moral condition and improvement of the scholars, changes of functionaries,

* See Cousin's *Report*.

domestic concerns, and also the state of the buildings, furniture library, &c.,* so that every defect may be remedied, and every necessary want supplied.

Such is a faint outline of what is required to realize the great end of a national education. The suffering, ignorance, and vices of the people of Great Britain, cry aloud for redress ; it is echoed back by the enthusiastic appeals of the learned and the good ; and yet is education a question of expediency. And with whom has this question arisen ? With men whose sacred calling should have made them to rejoice in the ameliorating tendencies of education, should have converted them from a spirit of rivalry to christian concession and encouragement. Let them turn to Holland and Germany for the expediency of a national education, and then enter into a comparison of the moral and intellectual character of the three kingdoms.

"Lords and Commons of England, consider what nation it is whereof ye are the governors. A nation not slow and dull, but of a quick, ingenious, and discerning spirit ; acute to invent, subtle and sinewy to discourse ; not beneath the reach of any point the highest that human capacity can soar to. What wants there to such a towardsly and pregnant soil but wise and faithful labourers, to make a knowing people, a nation of prophets, of sages, and of worthies?"

CRITICAL OBSERVATIONS ON BISHOP BURNETT'S "HISTORY OF THE REFORMATION OF THE CHURCH OF ENGLAND."

(Continued from page 234, vol. 9).

It is the remark of Burnett respecting Henry, that "it does not appear that cruelty was natural to him ; for in twenty-five years none had suffered for any crime against the state but Pole, Earl of Suffolk, and Stafford, Duke of Buckingham. The former was prosecuted in obedience to his father's last command at his death : his severity to the other was imputed to the cardinal's malice. The proceedings were also legal." Now, upon what pretext did Henry consign John

* See Cousin's *Report*.

de la Pole, the nephew of Edward IV., to the hands of the executioner, and by this cruel act show himself inaccessible to pity? Solely because it had been said that the people were so well affected to the house of York, as that they might take Edmund Pole out of the Tower, and set him up: it was thought that he should be dispatched out of the way: whereupon they cut off his head." This event occurred on the 30th of April, 1515; so early did Henry commence his deeds of blood.

We think, also, that Burnett's opinion is discernible in the following statement respecting Empson and Dudley, the notorious tools of his father's rapacity. "When they had thus fallen, many and great complaints came in from all parts against them; they also, apprehending the danger they were like to be in upon their master's death, had been practising with their partners to gather about them all the power they could bring together, whether to secure themselves from popular rage, or to make themselves considerable, or formidable to the new king."¹ Now, here we must either reject the presumption of unbiassed motives—we must repudiate the disposition of the historian to extenuate the despotism and tyranny early indicated by Henry—or else affirm that Burnett has not done his duty to the reader, by neglecting to apply his researches in this matter to their most effectual purpose, viz. by involving in much obscurity what appears to be the groundwork and realities of the case. Empson and Dudley were convicted before a jury of the charge of high treason, witnesses being easily found to depose that they had attempted to seize on London with an armed force, and to possess themselves of the government, upon the death of the late king. In consequence of this charge, the features of which are full of the grossest improbabilities, they were attainted in parliament,² which, on this occasion, was very willing to please the people. But though this bill of attainder passed the house of peers without a single dissentient voice,³ what inference of guilt can be drawn from this fact, when after these extortioners—"these ravening wolves," as Hall so justly designates them—had been brought to the scaffold by the heavy vengeance of the people, the sons of these culprits obtained a speedy reversal of the attainders?⁴ If Empson and Dudley could have entertained such extravagant intentions as they were accused of, their offspring

¹ History of the Reformation, vol. i, p. 3.

² See Hall, p. 806.

³ Lords' Journal, February 21, 1510.

⁴ Billa restit. pro heredibus Edmundi Dudley.—Lords' Journal.

would have been exposed to the special hatred of Henry, and not have been the objects of his bounty or clemency.⁵

Beyond a shadow of doubt, much of Burnett's leaning towards Henry arose from this monarch's exertions in support of the Reformation; but still his unflinching advocacy of him on occasions where the judgment of so many wise, learned, and honest men is against him, creates in us the unpleasant reflection that the ascertainment of truth, in order that the ends of historical justice might be satisfied, was but a secondary consideration to the framing a plausible apology for acts which, if they had been perpetrated by any other sovereign, he would probably have pencilled with the strongest colours of deformity. The false reasoning, for example, by which he attempts to reconcile us to the punishment of those who refused to acknowledge the king's supremacy, does violence to the common sense and common feelings of his readers. An aspirant for honest fame, such as Burnett was, should have been careful to set a mark of condemnation on this particular act, instead of insinuating that there was a colourable pretext for it. Like the mirage, however, of the Egyptian sands, such arguments as the following can only delude the imagination:—"The pope's power over the clergy was so absolute, and their dependence and obedience to him was so implicit, and the popish clergy had so great an interest in the superstitious multitude, that nothing but a stronger passion could either tame the clergy or quiet the people. If there had been the least hope of impunity, the last part of his reign would have been one continued rebellion; therefore, to prevent a more profusion of blood, it seemed necessary to execute laws severely in some particular instances."

In the page of modern history, we believe, it will be found that Henry was the first sovereign who caused the executioner to hold up the heads of those who had shared the fondest endearments of his marriage bed. The consigning his fifth wife to the scaffold, it has been argued by some, was justified, and even necessitated, by the considerations of private honour and public duty. But no moral writer is required to draw nicely the line of demarcation between right and wrong, before he can safely speak of the judicial murder of Queen Anne with horror and detestation, or pronounce it a deed which will damn the name of this monarch to all posterity, from its outraging those principles, the sacredness of which has been recognized by the whole civilized world. But though courts had not corrupted the

⁵ Empson's Petition, *id.* 14.

heart, or perverted the intellect of Burnett, yet has he told the story of Anne Boleyn (which is one full of dramatic interest), not only without the smallest warmth of narration, but in so cautious and apologetical a tone that, if he had not been laudably solicitous to vindicate her innocence by evidence which would bear the strictest scrutiny, one might be almost led to suppose that there was enough criminating matter in her behaviour to furnish her insulter and oppressor with the means of his own justification. A few words of generous compassion he might conscientiously have spared to the great patroness of reformation.⁶ It may, however, be said, that while we meet with no direct expression in Burnett of regret and indignation at the sufferings of the ill-fated woman, there is in the following brief but emphatic remark a more concentrated feeling of abomination of her destroyer than could be shown by the most studied invectives :—"But nothing did more evidently discover the secret cause of this queen's ruin, than the king's marrying Jane Seymour the day after her execution ;" and he might have added that, in the course of the day on which she was beheaded, the king, with a most infuriated contempt of humanity, appeared dressed in white. It would be uncandid and perhaps unjust, to assert that our historian's principles were not decidedly hostile to such iniquitous proceedings, but they were always modified in their application by a regard for Henry's character, otherwise it would be difficult to account for such remarks as these, with reference to a behaviour maintained at the expence of law, religion, and right feeling :—"That few attempt upon the chastity or make declarations of love to persons of so exalted a quality, except they see some invitations in their carriage : " and again, in allusion to Anne, he remarks that "her carriage had given just cause

⁶ From the zeal alone which the queen evinced in befriending those who promoted the translation of the Holy Scriptures into the vernacular tongue, her name deserves to be ranked among the list of reformers. In the following passage of a letter to Cromwell, Anne desires the good services of that minister in behalf of Richard Herman, who had been imprisoned at Antwerp by the orders of Cardinal Wolsey, "for nothing els (as he affermethe)," says the queen, "but onely for that he dyd, bothe with his goodis and pollicie, to his greate hurte and hynderans in this worlde, helpe to the setting of the Newe Testamente in Englishe."—See Ellis's *Letters of English History*, vol. ii., p. 46. Her own copy of Tyndale's translation of the New Testament, imprinted at Antwerp by Martin Emperour, anno m.d.xxxiv, is still extant among the books bequeathed, in 1779, to the British Museum, by the Rev. Clayton Mordaunt Cracherode. It is upon vellum. Illuminated upon the gilding of the leaves, in a red letter, are the words, *Anna, Regina Anglice*.

of some jealousy, and that being the rage of man, it was no wonder if a king of his temper, conceiving it against one whom he had so signally obliged, was transported into unjustifiable excesses."

Now we cannot allow that these views are substantially correct, with reference to the actions of Anne. Admitting that perpetual restraint and vigilant attention to ceremonious observances are the most effectual safeguards of royal virtue, yet it by no means follows that Anne, though bred up in the frank familiarity of the French court, and fond of it as was natural to her age and lively disposition; addicted, also, to a love of romantic gallantry, and thus more often led to display the pleasing manners and easy affability of the woman, than the proud demeanour and unsocial dignity of the queen—had furnished any grounds for grave suspicion against her innocence. For Anne to be so vain as to allow her distinguished favourites to speak of her charms and accomplishments before her, may not be strictly defensible; but to intimate that these venial delinquencies justify, in the remotest degree, a pretence for her head being laid in the dust, is administering historical justice in a way little suited to make a right impression on the public mind. Because Anne joined heart and soul with the reformers of our church in sweeping away the old-established institutions of the country, her character has been traduced without measure and moderation by all popish historians. To the very last, Dr. Lingard brings against her virtuous reputation his bitter accusations and sceptical cavillings.⁷ Her guilt is plausibly

⁷ Upon no other authority than a letter of the French Ambassador, which scarcely amounts to hearsay, Dr. Lingard asserts that Henry had cohabited with Anne for three years, whereas we learn from one of the most authentic accounts, "that she only at the end yielded to give her consent of marriage to him, whom hardly any other was found able to keep their hold against."—See Cavendish's *Life of Wolsey*, p. 421-42. On a point where no direct proofs can be obtained, the next best criterion of historical truth is to be had in the circumstances of clear and substantial presumption. And these, we think, when blended together, must satisfy any man of moderate candour that the reputation of Anne is not impeachable, at least till the eve of her elevation. From an epistle of Cranmer, which has been published in the *Archæologia*, and in Ellis's *Letters on English History*, vol. ii, p. 34, it would appear that the archbishop believed Elizabeth to have been conceived as well as born in wedlock; while it is certain that no pregnancy took place till after the marriage—a circumstance which cannot be imputed to any infecundity in Anne, as she twice proved to be in that state "in which ladies wish to be who love their lords," within little more than two years after the period of her marriage. It, then, the solemnity of Henry's protestations to make her his wife as soon as he could procure his divorce, conjoined with his constant and familiar access to her society, and his personal attractions and

enough insinuated by him, from this among other facts, that while Mary no sooner ascended to the throne than she hastened to repeal the acts derogatory to the honour of Catharine, Elizabeth made no attempt to vindicate the memory of her mother; the proceedings were not reviewed, the act of attainder and divorce was not repealed. Anticipating doubts, objections, and enquiries of this sort, Burnett has thus replied to them:—"That it was the great wisdom of that time not to suffer such things to be called in question; since no wise government will admit of a debate about the clearness of the prince's title. For the very attempting to prove it weakens it more than any of the proofs that are brought can confirm it; therefore it was prudently done of that queen" (speaking of Elizabeth) "and her great minister never to suffer any vindication or apology to be written. Some indiscretions could not be denied, and these would all have been caught hold of by the busy emissaries of Rome and Spain." These, no doubt, were the dictates of sound political wisdom, and Elizabeth reaped the fruits of them. But we are surprised that another and perhaps more admissible reason did not occur to the penetration of the bishop, for the silence of the queen on this delicate and important subject. If we are to credit traditionary accounts, but which, we are aware, often pass with men of judgment for nothing more than the lie of the day, Henry, at the final close of his life, ex-

accomplishments, threw her off her guard so far as to become his mistress before she was promoted to the honours of a wife and queen, her resistance must have ceased at the very end of their long courtship. Should it be said that Wolsey, in his confidential communications to his trusty servant Cavenish, characterized Anne as the "*night crow*, that cries ever in the king's ear against me," and therefore, from that emphatic expression, the loss of the most precious jewel of her sex is to be inferred, the obvious reply is, that the appellation of *night crow*, as here given, carries with it no other interpretation or meaning than what is simply descriptive of a bird of ill omen.

The owl shriek'd at thy birth—an evil sign;
The *night crow* cry'd, aboding luckless time."—*Henry VI*, part 3.

and such he might well term her, from the desire she so strongly manifested to perplex and defeat his maturest counsels. "Mistress Anne Boleyn," says Lord Herbert, "having learned from some of the king's wisest and gravest counsellors, divers malversations of the cardinal, was so far from disguising them that she even misrepresented his better actions."—*Life of Henry*, p. 289. We would say, then, upon this subject, that two things seem quite indisputable; first, that there was no stain upon the character of Anne till just before the period of her secret marriage with the king; and secondly, that Dr. Lingard has shown here that his heart was as ill-schooled as his head.

pressed the deepest contrition and remorse⁸ for having been the first sovereign of Europe who had condemned his innocent and highly accomplished queen to the block.⁹ Surely, then, the supposition is not

⁸ "*Plusieurs Gentilshommes Anglois m'ont assuré qu'il eut belle repentance des offenses par luy commises, estant à l'article de la mort : et entre les autres choses de l'injur et crime commise contre la dite Royne Anne de Boleyn, faulsement vaincue et accusée de ce qu'on luy imposoit.*"—*Cosmographie Universelle* De A. Thevet, Paris, 1675, tom. ii, p. 658.

⁹ She was not only skilled in music and dancing, but her literary education appears to have been more complete and of a much higher order than was usually given, in those days to the younger daughters of families of rank.—See Lord Herbert, p. 285. We have, indeed, a remarkable proof of this last observation in Anne's memorable letter "from her doleful prison in the tower." It is, perhaps, not to be surpassed, for elegance and simplicity, by any composition extant of the same character in the English language. Dr. Lingard, however, professes to think that this letter is not authentic—that is to say, it is not the genuine production of the writer whose name it bears. "I have not noticed," says he, "Anne's letter to Henry, supposed to be written by her in the Tower, because there is no reason to believe it authentic. It is said to have been found among Cromwell's papers, but bears no resemblance to the queen's genuine letters in language, or spelling, or writing, or signature."—*Hist. of England*, vol. vi, p. 315, note 22. It will, however, require something more than these *ipse dixit* assertions to prove that the words which are here embodied in a written form are not solely and absolutely the words of Anne. Had any one assisted her in this beautiful letter, an air of artifice and study would have been substituted in the place of heart-touching earnestness and fervid intensity of feeling. True it is, that in her love-letters to the king, though very creditable to a young lady of the sixteenth century, we meet with no characteristic marks of this admirable composition. But the natural warmth of her temper, then under the influence of the strongest religious excitement, urged on by an over-ruling motive, burst forth into the most ardent and impassioned language; and lifted up, as it were, above herself, her diction rose to an elevation and dignity of style undiscoverable in her other speeches and letters, and only to be found in that short prayer which she uttered when the sentence of death was passed upon her:—"Oh! Father of Mankind—the way, the life, and the truth"—thou knowest whether I have deserved this death!" Besides, she was too closely watched by her stern keeper, Sir William Kingston, lieutenant of the Tower, to allow of her being aided by a more experienced pen. The original is supposed to be no longer in existence, but the copy of it is believed to be in the handwriting of the latter part of Henry's reign. If it were not to fall into the reprehensible error of making the imagination the rule of our judgment, we should be almost tempted to infer that the internal feeling produced by the perusal of this celebrated epistle furnishes an additional proof of its being written only by Anne Boleyn. But, whatever judgment may be formed of this reasoning, it is manifest that the spirit of hostility evinced by Dr. Lingard, whenever he has occasion to mention her name, is of that rancorous sort that our sympathies become stronger on the side of this oppressed

improbable, that this wife-killing monster, conscious how utterly unfit the details of the official enquiry into the conduct of Anne were to meet the public eye—for, as an ancient chronicler observes, "she made such wise and discreet answers that she seemed fully to clear herself"—should have determined, in his dread of posthumous infamy, to put an effectual stop to all further investigation of this matter, by destroying the judicial documents of the trial. The attempt to explain the motives of action of a prince, and he of the most capricious mind, who one day pardoned and another destroyed, without law, beyond law, and against law, and who lived three centuries ago, may be thought chargeable with the highest absurdity. But without drawing the foregoing conclusion, it would be difficult to believe that Elizabeth had not entertained some secret misgivings respecting her mother's innocence.

The unbiassed reader, probably, will concur with us, that Burnett has betrayed a considerable want of candour in his delineation of the character of Cardinal Wolsey. For, however historians may be at issue concerning his general conduct, yet they cannot but agree with respect to his fitness to govern a state, and direct its affairs prosperously and gloriously.¹⁰ By most English imaginations, the cardinal

and calumniated lady. "Her fall," says Bishop Godwin, "was imputed to the *treacherous calumnies of the malicious popelings*; and nearly three generations have now passed away without taking off the edge of their hatred to her name."

¹⁰ The sentiments of a judicious stranger, who has opportunities of studying the character of the leading personages of the court to which he resorts, are of more value than whole pages of inflated panegyric or violent invective. The following account of "this great child of honour," Wolsey, is very discriminating, though evidently there is a reluctant effort in the mind of the observer to admit that he was as superior in abilities as in authority to the rest of Henry's ministers. After allowing that the king's conduct was still more self-willed and outrageous upon the death of the cardinal, the writer thus proceeds:—"So this was the end of this poor, overweening, presumptuous Cardinal Wolsey, who thought that his power exceeded that of every man, and that his fortunes were exposed to no change—so highly was he elated by his too arrogant opinions. Would we, however, judge him with due reference to all his qualities, we must confess that he was wanting neither in understanding nor penetration, nor in other qualities requisite in so exalted a situation. He possessed prudence and liveliness of intellect, strength and energy enough to go to the bottom of all public affairs; and conducted them all with such success that no state was richer and more flourishing than England, no king more respected than Henry VIII, so long as the cardinal was at the head of affairs. Twice he decided on the differences between the emperor and the king of France, and was paid court to by the ministers of both

will be ranked among the greatest ministers which this country has ever produced. Thoroughly conversant with the internal affairs of the continental nations, his spirit may be said to have presided over their politics; and it was the wisdom of his government to maintain the balance of power between Austria and France, and to place his sovereign in such a commanding attitude as to be recognised as the arbiter of Europe. The league of 1518, concluded at Greenwich, has been considered a model for all treaties of peace. To render law cheap, expeditious, and effectual, this great man, when chancellor, established courts of requests, and to him England is indebted for a regular system in the administration of justice; while he instituted a general legantine visitation for the purpose of reforming abuses. His love and encouragement of letters are amply attested by his munificent endowments at Ipswich and Oxford. Medical science, also, found in him a liberal patron; through his all-powerful influence with Henry, the present College of Physicians was established. Greater claims, too, had Wolsey, than any former minister, to a knowledge of political economy. Nor should it be forgotten, in the mention of his admirable capacity for the business of government, that, by directing Henry's attention to his navy, he laid the foundation of that maritime and commercial greatness, and of that colonial empire, which, in a more advanced period of national progress, was to obtain for this country a proud pre-eminence over every other nation on the face of the globe. Such a minister was Cardinal Wolsey, with all his exorbitant lust of personal aggrandizement.¹¹

those sovereigns, as if they had been servants of the king of England, and every one sought to conciliate him with a view of gaining his own ends. In proof of his pride it is related, that he caused himself to be served upon the knee by English lords and allowed himself the use of haughty and contemptuous language towards foreign ambassadors. It is certain that all on their return home, spoke of the pomp and the glory as well as of the pride and arrogance of the Cardinal of York."—See MSS. de St. Germain de Près, vol. 740, in Lord Francis Egerton's Translation of the History of the XVI and XVII centuries, by Raumer, vol ii, p. 62-3.

¹¹ Mr. Custance, in his Popular Survey of the Reformation, is ever unwilling to allow him the possession of a single good or great quality. "His pride and licentiousness stifled totally every virtuous and patriotic feeling in his mind."—p. 122. As blind prejudice so often heaps inconsistent accusations, this hater of the cardinal says, upon the authority of Burnett, that Wolsey, with a profaneness truly shocking, declared that he *preferred* the king's favour to that of Almighty God; whereas his real words are these:—"This is the just reward of my pains and study, not regarding my service to God, but only to my prince."

But our historian has dealt hard measure with him from the outset to the close of his splendid career. He begins by telling us, in reference to his rise, "that all foreign treaties and places of trust at home were at his ordering; he did what he pleased." Now, though Henry had made him "the prime man of the state," and he thus became the life and soul of every grand transaction that engaged the attention of the sovereigns of Christendom, yet we must not suppose, however it might gratify the pride of the English monarch that foreign potentates should admire the genius of his minister, that he indolently threw the reins of government into his hands, and suffered him to do, as Burnett says, "what he pleased:" for we shall find in the correspondence between the king and Wolsey in the state papers, published under the authority of His Majesty's commission, that most of the cardinal's plans of policy, whether domestic or foreign, underwent a grave deliberation, and were sometimes rejected, by the king; or his favourite views and wishes were sometimes thwarted by him. For instance, against the advice of his minister, Henry appointed Lord Essex to the command of the corps of archers, at the head of which Wolsey proposed to march with his cross.

According to Burnett's account, the cardinal, as a churchman, was a disgrace to his profession. Yet he admits that, "though Wolsey judged cardinals as princes of the church, and therefore not to be comprehended within ordinary ecclesiastical laws, it was his design to reform the inferior clergy by all the means he could think of; and to visit the several monasteries of England, that in discovering their corruptions he might the better justify the intention he had to suppress most of them, and convert them into bishopricks, cathedrals, collegiate churches, and colleges." Of the general complexion of his religious feelings and opinions, if we are to give implicit credit to the bishop, we shall find it hard to point out "any thing commendable in them;" but such sentences as the following are worthy and noble manifestations of a great and pious mind:—"Herein to say the truth, and to acquit myself of my duty and most tender zeal towards his holiness, I cannot see how it may stand with the pleasure of the Almighty God, that the heads of the church should thus involve and mix themselves and the state, by conjunction, into temporal princes in the wars; but that, as I verily suppose, since the leagues offensive and defensive, or both, have been used to be made in the name of the pope, God has stricken and sent affliction to the holy church."

We again quote from Burnett. "They" (the bishops of Winchester and Rochester) "both hated the cardinal. The one thought him

ungrateful to him who had raised him ; the other, being a man of a strict life, hated him for his vices." But here, also, our historian's prejudices against Wolsey have led him astray, or his deep and laborious researches have not been well directed. From the following interesting passage in a letter of the bishop of Winchester to the cardinal, it will appear that it was not the ingratitude of the favourite which urged him to withdraw from the court, but a deep conviction of his own sinfulness in not having devoted his best powers to the faithful discharge of his episcopal duties. "Truely, my singular good lord, syns the kynge's grace lycenced me to remayne in my chyrche, and thereabowts uppon my cure, wherein I have been almost by the space of xxx yeres so neglgen, that of iiij severall cathedral chyrches that I have successively had, there be two—scilicet, Excestre and Wellys—that I never see, and innumerable sowls whereof I never see the bodyes : and specially sins by hys licence I left the kepyng of hys privy seale, and most specially sens my last departyng fro your good lordship and the counsell, I have determyned, and, betwixt God and me, utterly renounceyed the medlyng with worldly maters ; specially concernyng the werre or any thing to it apperteignyng (whereof, for the many intollerable enormytes that I have seen ensue by the said werre in tyme past, I have *noo littel remorse* in my consience) ; thynking that if I dyd contynuall penance for it all dayes of my lyfe, though I should lyfe xx yeres longer than I may doo, I could not yit make sufficient recompense therefor."

In the following statement, how perceptible is the wish to convict Wolsey of greedy ambition and intolerable pride ! when a fair examination of the facts would have forced Burnett to come to a very different conclusion :—"Warham was lord chancellor the first seven years of the king's reign, but retired to give place to this aspiring favourite, *who had a mind to the great seal*,¹² that there might be no interfering between the legatine and chancery courts. And perhaps it wrought somewhat upon his vanity, that, even after he was cardinal, Warham, as lord chancellor, took place of him." Now, from high authorities, we learn that the archbishop had long been desirous to resign the seals, and to devote himself solely to the discharge of his episcopal functions ; and that Henry, being satisfied of the reasonableness of this wish, willingly acquiesced in it. But when Wolsey was

¹² Lord Herbert, for instance, informs us "that William Warham, archbishop of Canterbury, resigning to the king *voluntarily* the place of lord chancellor, and retiring himself from court by reason of his age to a private life, that place was conferred upon Wolsey."—Hist. of Henry VIII, p. 57.

invited by the king to accept the vacant post, he manifested the utmost reluctance; nor till Henry had reiterated his solicitations, could he be prevailed upon to undertake that office, in which he conducted himself in a most praiseworthy manner; for his excellent capacity supplied the place of experience and study; and his decisions, being uninfluenced by others, for their equity and judgment, were highly commended by his contemporaries. He is said, by his biographer, "to have spared neither high nor low, but to have judged every estate according to their merits and deserts."

The commendation bestowed on him, "that he spared neither high nor low, but judged every estate according to their merits or deserts," would justify us in asserting that to a great statesman he added the still rarer one of an upright judge. The undiscovered virtues of punishing the powerful oppressor, and protecting the poor man, were practised by him, even from the admission of Hall, who is always disposed to take a part against "the great cardinal." Most contemporary writers seem to think that this bold minister's haughty self-estimation and proportionate contempt of others, extinguished in him all the affections of benevolence and sympathy. These feelings may not have been lasting or intense in one who was so pampered with the gifts of fortune, yet he gave several notable proofs in the course of his brilliant career, and when placed on the summit of society, that he was possessed of those dispositions which are the most effectual motives to kind actions. Upon some men of Suffolk¹³—Wolsey's native county, and to which he had always the bias of attachment—being brought before the council of the star chamber for obstructing the commissioners sent throughout the kingdom to exact benevolences from the people, the king's attorney, when they had received pardon for their offence, asked surety for the future good bearing of the prisoners. They answered, that they could find none. Immediately the cardinal said, "I will be one, because you are my countrymen; and my Lorde of Norfolk will be another." The prisoners were then discharged, and money given them for their conveyance home. Some, no doubt, will consider this conduct of Wolsey as a contrivance to make himself popular with the lower order of the people; but surely, without any great stretch of liberality, we may believe that he had something better in view than the momentary plaudits of the giddy and unthinking multitude.

The strong original tendencies to pride and self-exultation in the

¹³ See *Lands. M.S.*, No. 639; p. 117.

character of Wolsey are described, by Burnett, as being exchanged, in his *fall*, for the meanest submission, or the most pusillanimous despondency. "As he had carried his greatness with most extravagant pride, so he was no less basely *cast down* with his misfortune; and having no ballast within himself, but being wholly guided by things without him, he was lifted up or cast down as the scales of fortune turned." To a mind so imperious, scornful, and unschooled in humiliation—"for I assure you," says Cavendish, "that in his time, he was the highest man, in all his proceedings, alive,"—the sudden fall "from his high estate" was quite enough to *woman* him, as it were; though it must be acknowledged, that his want of fortitude and equanimity on this trying occasion, has sunk his character greatly in the estimation of posterity. One solitary instance we have, of his fainting energies—of displaying a courage and dignity of soul worthy of his former greatness—it was a palpable act of injustice in Burnett not to have recorded, as it is to be found in the popular work of our martyrologist. Upon master Shelley, one of the judges of the common pleas, bluntly demanding of him, in behalf of the king, the surrendering up of York Palace, Wolsey properly urged that it was not appropriated to his own use, but pertained to his see, and therefore such yielding upon his part would be, as it were, a "departure with another's rights for ever." Shelley told him that his highness had "sent for all the judges, and for all his learned counsel, in *whose determinations it was fully resolved that his grace should recognise before a judge the right thereof to be in the king and his successors.*" "Master Shelley," quoth he, "ye shall make report to the king's highness that I am his obedient subject, and faithfull chaplain and beadman, whose royal commandment and request I will in no wise disobey, but most gladly fulfil and accomplish his princely will and pleasure in all things; and in especial in this matter, inasmuch as ye, the fathers of the laws, say that I may lawfully do it. Therefore I charge *your conscience*, and discharge mine. Howbeit, I pray you, *show His Majesty from me that I most humbly desire His Highness to call to his most gracious remembrance that there is both Heaven and Hell.*" And therewith the clerk was called, who wrote my lord's recognizance."

In the forty-four articles of impeachment against Wolsey, which Lord Herbert has printed in his History, it might be supposed, from the mode in which they are spoken of by Burnett, that every charge was duly substantiated; but that this is not a justifiable inference is evident from this circumstance alone, that the bill of impeachment,

signed by fourteen peers and the law officers of the crown, was actually thrown out by the House of Commons. In reference to its contents, Wolsey uses these expressions :—"Whereof a great part may be untrue, and those which be true are of such sort that by the doing thereof no malice or untruth can be arrected unto me, neither to the prince's person, nor to the realm." Lord Herbert, indeed, is disposed to think that no man ever fell from so high a station who had so few real crimes objected to him. Perhaps, in this opinion, he may show too much indulgence to the cardinal. Yet the rejection of the various articles of accusation by a House of Common whose slavish prostration of mind to Henry is so perfectly notorious, must be interpreted into no mean proof of his innocence ; for the eagerness with which the king joined with the cardinal's enemies to destroy him, will appear from the fact that, when the plan of parliamentary impeachment miscarried, Henry assailed him, with consummate injustice, upon the celebrated statute of provisors : for that this indictment was subsequent to the attack in parliament is placed beyond dispute by Cavendish, and by the articles of impeachment themselves.

We will now say a few words upon our historian's marked predilection for that bold and highly-talented plebeian, Cromwell, who, from the humblest beginnings, rose not only to be the first minister of state, but to possess the same paramount influence with Henry in the management of all affairs as Wolsey had done : and whose sudden exaltation, like that of the cardinal, must have provoked the great but ignorant¹⁴ nobles of the land to the bitterest wrath and jealousy, on beholding the son of a tailor or blacksmith so intimate with their dread autocrat, that an eye-witness of their daily intercourse has said, "I have seen him as familiar with the king as though he had been of his blood."

But though Cromwell was endued with great talents for business ; though his shrewdness, quickness, self-possession, determined mind, and intensity of purpose, and that species of insensibility which allows

¹⁴ "A nobleman about the court having said to Mr. Pace, one of the secretaries to King Henry VIII., that it was enough for noblemen's sons to wind their horn and to carry their hawk fair, and to leave study and learning to the children of meaner brethren, Mr. Pace replied, "Then his lordship and the rest of the noblemen must be content to leave unto the sons of meaner persons the managing of affairs of estate, when their own children please themselves with winding their horns and managing their hawks, and other follies of the country."—Camden's Remains. No wonder that in those days it was the complaint of the proud Buckingham, "that a beggar's book outweighed the blood of a noble."

no compunctious visitings, no laws of conscience, to prevent the stroke of ambition ; and that subtlety in his understanding which, had Providence cast his birth in later days, would have made him a prime disciple of the famous Jurist Barbeyrac—whose doctrine it was, that we may feign or dissemble as our lawful interest may demand—though these several combined qualities enabled him, soon after he had set his foot over the threshold of the court, to become the first person in it, yet we cannot recognise the propriety of Burnett styling him a *great* man. For we must look for higher qualities than aptitude of parts for government—for some grand capabilities in the range of the mind—before we can admit this. Perfectly true it was, that Cromwell reformed the religious institutions of the state. The obligations, for instance, we owe him as the originator of that truly valuable improvement, the institution of parish registers, ought never to be forgotten ; nevertheless, all his aims and designs to serve his country centered in self—the sole concern of little men. The regulating principle, the fundamental rule of all his doings, was his own personal aggrandisement. There might be a masculine strength of intellect in him, but there was no manly fortitude of virtue. He had no moral qualities of genius, no bursts of an elevated spirit ; and as for that noble moral enthusiasm which aspires only to the honest eulogy of posterity—to be named with glory in the page of history—such throbs and throes of the patriot heart were no more to be expected from the course of his action, than that traces should be found, among his stern and crafty memoranda, of a hymn composed to fame or liberty.

The advice of Cromwell to Henry, to snap asunder the papal chains by declaring himself the head of the church within his own realm, has no doubt rendered his name a great favorite with most protestant annalists. In these feelings of partiality, Burnett has largely shared. But whether the zealous part he took in the reformation originated from motives of ambition or faction, or from sincere attachment to the cause, is a problem difficult of solution ; because his concurrence in all the persecutions against the protestants would seem to imply his ready conformity to any system of doctrine and discipline, which most promoted his own immediate and private advantage. His cupidity, his tyranny, and oppression, his eagerness to overwhelm the defenceless, are now made clear and manifest by Sir Henry Ellis's publication of his short notes, or remembrances to guide his memory when he attended the king or the council."

With respect to his noble and disinterested conduct, as Burnett

styles it, to the fallen and disgraced cardinal, all his gratitude may be said to have merged into policy. He was a sordid and selfish calculator. His support¹⁵ of Wolsey went no further, as Sir Henry Ellis justly observes, "than a given point." When he saw that the ruin of that minister was resolved upon, he seized the opportunity to raise himself, to make his fall the stepping-stone to power. After he had delivered to Wolsey the thousand pounds from the king to pay the expences of his journey to the north, he seems to have done no more for him. "We have no mention of Cromwell," says Sir Henry Ellis, "when the cardinal was ordered to London to take his trial, none upon his journey, none in his last moments; nor have we any subsequent introduction of the name of Wolsey by the vicar general, except in the single instance of the dialogue at Archbishop Cranmer's table, when Cromwell declared that 'he was never so far in love with Wolsey as to have waited on him to Rome if he had been chosen pope.' As our belief, then, on the devotedness of his affection to Wolsey must rest upon no better proof than on Shakspeare's play of Henry the Eighth, so the celebrated story related by Burnett of Cromwell's meeting a Lucqueze merchant in the streets of London, who, whilst abroad, had rendered him substantial good offices when he most needed them, and generously reinstating him in his former opulence, upon the discovery of his being reduced to the greatest want, can find no more satisfactory authority than a novel of Bandello. Cromwell's own language may assure us of his preference of a tyrannical administration of government to a constitutional one, when he proposed to Henry to apply the brack—a species of rack—¹⁶ to a state delinquent. "We cannot, as yet, get the pith of his cre-

¹⁵ His cravings for pecuniary gain were such as to render him not at all nice or particular about extracting them from the pockets even of his protestant friends. When the venerable Latimer wrote to him to pray that the priory of Great Malvern might be spared, he offered five hundred marks for the king's favour, and two hundred for that of his own.—See Strype's Eccles. Mem., vol. i., p. 339.

¹⁶ Fortescue, who was successively lord chief justice and lord chancellor of England in the reign of Henry VI., declared the use of torture to be in direct opposition to the fundamental principles of the law of England, and considered the practice of it the high road to hell. "*Vere non lex Ritus talis esse perhibetur, sed potius semita ipsa est ad Gehennam.*"—*De Laudibus Legum Angliæ*, cap. xxii. Yet we know, from the registers of the proceedings of the privy council, that the practice of torture was common in the reign of the Tudors, while nothing can show in a stronger light the propensity of Cromwell to an arbitrary, unconstitutional system of government, than the above proposition to Henry.

dence; whereby I am advised to-morrowe ones go to the Tower and see him sett in the *Bracks*, and by torment compelled to confesse the truth." But if there could be a doubt of his willingness to be the remorseless agent of evil for the benefit of his ruler, his conduct to the heroic Countess of Salisbury would be quite sufficient to put this point beyond all question. As a preliminary step for persecuting her with a devilish¹⁷ craft and zeal, he sent for the judges, and gravely intimated his wishes to be informed whether Parliament might condemn an accused person without giving a hearing. Accustomed as they had been to his daring innovations upon legal rights, they at first shrunk from this; but afterwards this serious feeling of alarm gave way to the more threatening danger of their own imprisonment; and they framed such an answer, that the unscrupulous and subservient parliament determined that a bill of attainder might be passed without the formality of a previous trial: in consequence of which, the countess was found guilty of treason, and committed to the Tower.

When Burnett laments the hard fate of Cromwell, in being condemned without trial, examination, or evidence, at the same time he should have recollected that to this victim of flagrant injustice we are indebted for those bills which created such an abundance of constructive treasons; and for the invention of attainting persons (*already in prison*) by parliament, without bringing them to trial. Not all Cromwell's merits, therefore, in contributing so materially to the reformation—merits to be measured by a very high standard, with reference to his management of an imperious and capricious temper like Henry's—can compensate for his introduction of that detestable bill, under which, by a striking instance of retributive justice,¹⁸ he was the first to suffer death. How dreadful must have been the remorse,

¹⁷ Archbishop Parker, in characterizing these three eminent men, More, Gardiner, and Cromwell, observes, *Morus Gardinero doctior eoque Gardinerus juris peritior fuit, at Cromwellus prudentior and atque sanctor.*—*De Antiq. Brit. Eccles.*, 467. We should have thought the latter epithet more applicable to More than to Cromwell.

¹⁸ In order to justify his condemnation as a traitor, it was urged against him that he had drawn out his dagger, whilst privately conversing on the new learning, and declared that, if it were necessary, he would maintain the cause of the Reformation, sword in hand, against Henry himself.—*See Carte*, vol. iii., p. 157. A charge this, too absurd to impose even upon the most credulous. A more probable one was, "that he had misconducted himself in his office of vicegerent, and had screened heretics from punishment, and had written to the sheriffs to set them at liberty upon a false suggestion of an order from the king."—*See Collyer's Eccles. Hist.*, vol. ii., p. 176.

or how strong the desire of life in this satellite of absolutism, when he remonstrated, in a passage of the letter which he addressed from the Tower to his inexorable judge, against his own bill of attainder ! This passage Burnett, with an inexcusable heedlessness, has overlooked, or perhaps intentionally suppressed, from a reluctance to show Cromwell's exceeding baseness.

The excessive praises of Edward the Sixth are not conducive to the reputation of Burnett, as a judicious and impartial historian. But there is a powerful spell in names : and that of the first protestant king of this country must be pleaded in extenuation of expressions too little consonant with the spirit of wisdom and virtue. That the youthful prince outstripped other boys of his own age in the race of learning, is a point which the well-authenticated statements of his early diligence, his inclination to letters, and his seriousness of disposition, abundantly confirm. But that the dawn of his intellect surpassed the meridian of others, and that grey-headed statesmen, ripe scholars, and deep divines, quailed before the boy-king, is to suppose, with Cardan,¹⁹ his acquisitions almost miraculous. References certainly may be made to his metrical instructions respecting the Eucharist, and to his comedy called "the Whore of Babylon," for evidence of the precocity of his talents, or for a proof that, at least, he possessed a great facility of stringing together words and sentences.²⁰ Burnett tells us he was so forward in his learning that before he was eight years old he wrote Latin letters to his father, "who was a prince of that stern severity that one can hardly think those about his son durst cheat him by making letters for him." The difficulty, however, of believing this is insuperable, nursed and fed as he was upon Latin. How thoroughly imbued with partiality must that historian be who asserts that, without the assistance and corrections of his preceptors, a prince of Edward's tender years, could pen epistles in the Latin tongue, interlarded with quotations from Erasmus, Job,

¹⁹ This celebrated Italian philosopher calls him, in his *Opuscula*, Bas., 1559, fol., p. 14, *monstrificus puellus* ; and when we remember that this eccentric genius professed the Romish religion, his partiality is certainly rendered the less suspicious from that very circumstance.—See lib. xii. *De Genituris* : and printed by Burnett in his *Coll.* ii., l., *Hist. Reform.*

²⁰ In these performances, we find only indications of much controversial bitterness, and no promise of poetical excellence. The first piece, says Fox, was addressed to Sir Anthony St. Leger, but the other, though expressly stated to have been the production of this extraordinary boy, is attributed by Park to Decker.—See note to Warton's *History of English Poetry*, vol. iv., p. 18, 19.

Solomon, Ludovicus, Vives, St. Paul, Horace, Cicero, and Aristippus!²¹ Admiration of this brilliant meteor, that blazed for so short a time above the horizon of history, has led Burnett to assure us "that Edward had studied the matter of the mint, with the exchange and value of money, so that he understood it well, as appears by his journal. He also understood fortification, and designed well. He knew all the harbours and ports, both of his own dominions and of France and Scotland, and how much water they had, and what was the way of coming into them. He had acquired great knowledge in foreign affairs, so that he talked with the ambassadors about them in such a manner that they filled all the world with the highest opinion of him that was possible, which appears in most of the histories of that age." From this first sentence, it might almost be imagined that Edward was capable of expounding the doctrines of political economy; and from the concluding one we are required to believe that a boy of fourteen could speak upon subjects of foreign policy like a man of business and an orator: a supposition which would be hyperbolic even

²¹ We have had, certainly, very surprising instances of juvenile acquirement of languages. William Wotton, who so distinguished himself by his book on ancient and modern learning, when a boy, could readily translate Latin, Greek, and Hebrew. This he could do in his sixth year; and at thirteen he was acquainted with *twelve* languages.—See Monk's *Life of Bentley*, vol. i., p. 9, 10. It is curious, however, that while Burnett is so positive respecting the astonishing proficiency of Edward in classical learning, he should have been so sceptical about Catharine Parr's scholar-like attainments, as only to infer her knowledge of Latin from the fact of the young king addressing her, letter by letter, in that language. But the bishop is in error here; for Strype has printed a Latin epistle of that queen to the Princess Mary. The opinion of the retainer and biographer of Wolsey respecting Edward is unquestionably entitled to much value: first, because it was delivered after Edward's death; and secondly, because Cavendish, being a staunch Roman catholic, was not likely to run off into extravagant misrepresentations or conclusions in describing the beauties either of the reforming prince's person or mind. Yet hear his uncouth laudatory rhymes:—

"In connyng and wisdome Solomon's right heyer,
His wytt was so excellent, his sentence so profound.
Absolon in beawtie, his visage was fayer;
If he myght have lyved, there should not have been found,
A prince more excellent rayning on the ground."

Metrical Visions.

When enlightened foreigners who had visited the court of Edward were likewise so loud in his praises, posterity will hardly accuse his subjects of adulation.—See the account of the young king in the Florentine Petruccio Ubaldini's description of England in the year 1551; Raumer, vol. ii., p. 71.

to extravagance. This journal is certainly written with a clearness, simplicity, and precision, which bespeak those comprehensive talents that are not to be expected in a stripling. His letters, also, to his young friend, Barnaby Fitzpatrick, contain another example of the forwardness of the mental faculty. There is strong presumption, however, that the letter which he addressed to his sister Mary, exhorting her to abjure the errors of popery, was not his own production; since the princess could not help exclaiming, as she read it, "Ah! Mr. Cecil's pen has taken great pains here." Referring, again, to Edward's journal, we would say, in the temper of reprehension, that, if it be really his own composition, Burnett's humanity ought to have been shocked at the want of goodness and gentleness in it. Without a pang or sigh, this young prince could consign an uncle to the scaffold, whose only fault seems to have been that he wished to make himself the guardian of his crown and person in the room of his brother, and to whose decapitation he thus most unfeelingly alluded in his journal:—"The Lord Sudley, admiral of England, was condemned to death, and died in March ensuing." Two more passages in this celebrated diary give evidence that the heart of this young logician and theologian was but little alive to right notions on the destruction of human life:—"A certain Arian of the strangers, a Dutchman, being excommunicated by the congregation of his countrymen, was, after long examination, condemned to the fire."—"The Duke of Somerset" (his other uncle) "had his head cut off upon Tower Hill, between eight and nine o'clock." This unconcern about those executions, to borrow an expression of Mr. Hallam's, "betokens the young prince to have had too much Tudor blood in his veins." But, though we cannot echo all Burnett's praises²² of this precocious boy, that he was a youth of great promise is put out of all dispute by many contemporaneous testimonies. Old Latimer, whose temper was little disposed to flatter kings, allowed this unqualified panegyric to fall from his lips:—"His majesty hath more godly wit and understanding, more learning and knowledge, at this age, than twenty of his progenitors I could name had at any time of his

²² Burnett paints him *en beau*: but Collyer, perhaps, more to the life when he says, "his conscience was not always under a serviceable direction; he was tinctured with Erastian principles, and under wrong impressions as to church government. He seems to have had no notion of sacrilege, and—what is somewhat remarkable—most of the hardships were put upon ecclesiastics in the latter end of his reign, when his judgment was in the best condition.—p. 331.

life." The boy who, from a single hint thrown out in a sermon on charity by another prelate, could meditate those glorious institutions of his reign, the foundation of Christ's Hospital for the education of poor children, of St. Thomas and St. Bartholomew for the relief of the sick, and Bridewell for a penitentiary,²³ must have been possessed of some of the exalted qualities of a patriot and a true Christian.

Detesting, as we do, so much of the conduct of Mary, yet we cannot help remarking that Burnett has drawn such an appalling picture of her superstition and cruelty, that his account of this queen would justify the belief that, among other disgusting singularities connected with her character, was a keen relish for cutting off her subject's heads, and for converting her palaces into human slaughter-houses.²⁴ Now it is well known that the temper of the people whom she ruled had become so violent, by the religious and political crisis of the preceding reign, that nothing short of her adherence to the new religion would conciliate and satisfy them. Mary, however, having the taint of intolerance so deeply in her—which taint, be it remarked, her protestant opponents fully shared—of course, was not prepared to please them so far as to renounce what she felt not merely rested upon authority and presumption, but what had been inculcated upon her by education, and had been established by law. It is not difficult, then, to imagine her holding the opinion in perfect sincerity, awfully erroneous as it was, that to extirpate schism, by delivering over her protestant subjects to the secular arm,²⁵ was a most

²³ See Sir John Hayward's *Life and Raigne of Edward VI.*, p. 169; and likewise a short account of the Royal Hospitals in Entick's *Survey of London, Westminster, and Southwark*, vol. ii., p. 34, 35.

²⁴ If we are to believe the statement of an earlier historian of the Reformation, and who composed his history under equally strong party prejudices, her exterminating fury even exceeded that of Bonner, "whom all generations," says Fuller (book viii.), "shall call bloody." "Their blood she caused to be poured forth like water in most parts of the kingdom, but no where more abundantly than in Bonner's slaughter-house."—Heylin's *Hist. of the Reform.*, preface, p. 3.

²⁵ Burnett even insists that Mary endeavoured to establish the inquisition in this country—see introduction to the third volume of the *History of the Reformation*, p. xxix—while Dr. Lingard as stoutly denies the fact. In another passage he says, "arbitrary torture and secret informers seem to be two great steps made to prepare the nation for an inquisition"—vol. iii., p. 247. With the council books before him, surely Burnett might have collected sufficient information to ascertain the fact that the use of the rack was not confined to the reign of Mary.

righteous act. She was, in short, an honest, fearless, uncompromising bigot. But with respect to crimes which had no connexion with state affairs, there is ample evidence that she wished to have justice administered with clemency and equity; while in private life she was scrupulously moral, with a superiority of conduct which rendered her court a model of respectability and virtue. For even they who viewed the papal system with the same abhorrence as they did her bloody policy, hesitate not to acknowledge that she combined in her character some of the best feelings and sentiments of domesticity. Camden,²⁶ in enumerating her other virtues, eulogizes her compassion for the poor and liberality to the distressed; and Godwin, the unexceptionable purity of her conduct.²⁷ The tyrannical persecutions of the reformers by this queen have taken such fast hold of the sensitive imagination of Burnett, that, instead of speaking of her other actions and proceedings with the accuracy of a contemporary annalist, by drawing his materials from the fountain head, he has suffered erroneous conjectures and traditional fictions to usurp the place of facts; so that he has occasionally delineated Mary as if he had taken his information from that grave and creditable writer, who asserts that "she intended to make all the English women give suck to puppy dogs."

One instance, however, of fair dealing towards her, on the part of our historian, must not be passed over—his giving us a paper to the council, written in her own hand; from which we select a passage that will be thought worthy of being inscribed in letters of gold by those who maintain that the cause of genuine piety can only be aided, and the true interests of religion powerfully asserted, by a reform in every part of our national establishment:—"She also vainly believed that many benefices should not be in one man's hand, but that every priest ought to look to his cure, and reside upon it. And she looked on the pluralities over England to be a main cause of the want of good preachers, whose sermons, if joined with a good example,

²⁶ *Princeps apud omnes ob mores sanctissimos, pretatem in pauperes, liberalitatem in nobiles, atque ecclesiasticos nunquam satis laudata, Britannia. London, 1607, fol. p. 130.* Even the protestant bishop has the candour to say, "She was a woman of a strict and innocent life, that allowed herself few of the diversions with which courts abound."—*Hist. of the Reform.*, vol. ii., p. 743. See also a similar statement from Faust, the *Puritan* secretary of Walsingham, apud Birch, i., p. 39.

²⁷ *Mulier sane pia, clemens, moribusque castissimis, et usque laudanda, si religionis spectes.*—*Rev. Angl. Annal. Henry VIII., Edv VL, et Maria regnantibus.* London, 1616, fol., p. 123.

would do much good ; and without that, she thought that their services would profit little."

Respecting Bishop Gardiner, we think the charge may be made, with equal justice, that Burnett is too easily satisfied with imperfect testimony, with statements which he should have rejected as unworthy of credence ; and this from his being ready to class that prelate, for ferocity of character,²² with one who might be called a hunter of human blood ; for so pre-eminently infamous was Bonner's reputation that "every infant who could lisp his name was able to say, 'Bloody Bonner is Bishop of London.'" That Burnett's position here is at least doubtful, and probably erroneous, we think, appears by his omission of what we have the best authority for believing—that when Peter Martyr, in his apprehension that the fires of extermination were about to be kindled against the reformers, asked permission to quit the country, while several Roman catholics, imbued with the cruel and sanguinary spirit of Bonner, sought for his commitment, Gardiner not only insisted that he came over to England by an express invitation from the government, but generously provided him with the means for his departure. The bishop also holds out the chancellor as the originator and favourer of the Spanish alliance. But here again he is wrong ; for Gardiner had a decided aversion to tyrannical domination, his love of liberty being built on principle, and not on mere feeling. Aware, then, that the Emperor Charles was already too much feared in almost every state in Europe, and thoroughly sensible how that fear would be increased by his son becoming the husband of the Queen of England, like a patriot minister, he employed all his efforts in a struggle against this projected marriage between Philip and Mary. "Every child,"²³ says Father Parsons, "acquainted with that state, knoweth or may learn that Bishop Gardiner was of the contrary part or faction that favoured young Edward Courtenay, the Earl of Devonshire, and would have had him to marry the queen." We learn, indeed, from the despatches of Noailles, that with a manly freedom suitable to his high dignity and the importance

²² Burnett, however, cannot but allow that the letter of Gardiner to Sir John Godsalue does him great credit. In this letter he assigns his reasons for disobeying the injunctions issued by the council to the ecclesiastical visitors ; while he dwells upon the inefficacy of the king's power to command anything contrary to common law or to a statute.—vol. ii, append. 112. He also admits that the chancellor showed both his knowledge of and attachment to the civil constitution, by the securities in the treaty with Philip, and established by statute.—Vol. ii., p. 267.

²³ Watch-word, p. 41.

of the affair, the bishop expressed his disapprobation to Mary concerning her wish to marry a foreigner in preference to one born an Englishman and nearly allied to the crown. Nor is there evidence insufficient to substantiate the assertion that Mary would have accepted the hand of Courtenay—as Gardiner spoke the sentiments of the majority of the council—had she not discovered that he was addicted to the most licentious and profligate courses; and therefore, though she might have admired him (for his person and address were engaging), the severe austerity of her manners revolted at the idea of marrying one whose morals were affirmed to be vicious in the extreme. The following anecdotes, also, will serve to illustrate the foregoing observation, that Gardiner well understood the old ground of our political constitution. Upon being desired by Mary to give his undisguised opinion respecting a book, expressly written for the purpose of introducing a plan to render her independent of parliament. "Madam," exclaimed the chancellor, "it is a pity that so virtuous a lady should be surrounded by such sycophants. The book is naught, it is filled with things too horrible to be thought of." In the pursuit of place and power, Gardiner had generally penetration and sagacity to discover the party likely to be successful; but, in common with other ambitious men, he was often obliged to make those sacrifices to convenience which not only caused his sentiments to appear inconsistent and his conduct equivocal, but occasionally hurried him into acts bordering on tyranny and oppression. It is a calumny on his memory to say that he paid his court to Henry or his daughter, by displaying all the refinements of a Machiavellian policy, and by seizing every favourable opportunity to demonstrate his dislike to the principles of a free government. Again, in formal discussion with Cromwell before the king, upon the inherent rights of the crown, when the former was urging Henry to rule without the consent of the estates of the people of the realm—the necessity of which iniquitous piece of advice is not very obvious, since Henry was then as absolute as any of the Cæsars; for though the government might be free in theory, the practice and effect are perfectly notorious for having been directly contrary—Gardiner had the courage to assert that "statute and custom were alike opposed to arbitrary proceedings in the executive." But the reader shall hear, in Fox's own words, the account of this memorable conversation:—"The Lord Cromwell," says Gardiner, "had once put in the king's head to take upon him to have his will and pleasure regarded for a law; and thereupon I was called for at Hampton Court; and as he was

very stout, 'Come on, my Lord of Winchester,' quoth he, 'answer the king here: but speak plainly and directly, and shrink not, man. Is not that,' quoth he, 'that pleaseth the king, a law? Have ye not that in the civil wars, *quid principi placuit, &c.*?' I stood still, and wondered in my mind to what conclusion this would tend. The king saw me musing, and with gentle earnestness said, 'Answer him whether it be so or no!' I would not answer the Lord Cromwell, but delivered my speech to the king; and told him that I had read of kings who had their will always received for law, but that the form of his reign (to make the law his will) was more sure and quiet; and by this form of government ye be established,' quoth I, 'and it is agreeable with the nature of your people. If you begin a new manner of policy, how it may frame no man can tell. The king turned his back and left the matter.'" We approve our historian's praises of the enlightened promoter of the new learning, which led the way to civil and ecclesiastical freedom—the vital principle of the British liberty and constitution; but at the same time we might have expected that Burnett, as a friend of limited monarchy, and the expounder, in one of his political tracts, of the reciprocal duties of governors and the governed, should have been fired with indignation at Cromwell's proposition to Henry to make himself every thing and his people nothing.

Had Burnett judged Gardiner according to the standard of his own time and the circumstances in which he was placed, it would not, perhaps, have been difficult for him, on a careful examination of the leading incidents in the bishop's life to discover that there was less of the gall than the milk of human nature in his composition. The specimens which we are about to give, we are inclined to think, will justify this conclusion in the mind of the unprejudiced reader. That Gardiner possessed many requisites which fitted him for a political leader, was acknowledged by the opposite state parties; but, if we are to acquiesce in the opinion of our historian, there was one overpowering sentiment which actuated him alike at the council board, and in the ecclesiastical court—persecution; in short, he invests him with all the exterminating zeal of a papal inquisitor, who not only discards every nice feeling, but every pretension to common humanity; and therefore, according to his decision, we are to regard him as belonging to that class of prime ministers who wish to put down all religious and political modes of thinking by mere force, by the most uncompromising and sanguinary measures. The following statement, unsupported by any other evidence than that of the noted Father Persons, might have been

viewed with great distrust. But the assertion of the same fact by Roger Ascham (the celebrated preceptor of Queen Elizabeth) is at once a confirmation of its truth. "Verily, I believe," says the Jesuit, "that if a man should ask any good-natured protestant that lived in Queen Marie's tyme, and hath both wit to judge and indifferency to speak the truthe without passion, he will confesse that no one great man in that government was further off from blood and bloodiness, or from cruelle and revenge, than Bishop Gardiner, who was known to be a most tender-hearted and myld man in that behalf, in so much that it was some tymes, and by some great personages, objected to him, for no small fault, to be ever full of compassion in the office and charge that he bore: yea, to him especially it was imputed that none of the greatest and most known protestants in Queen Marie's reigne, was ever called to accompt, or put to trouble for religion."³⁰ In a letter to the Earl of Leicester, by Ascham, some years after the death of Gardiner, he expressly says, "Noe bishop in Queen Marye's dayes would have dealt so with me: for such estimac'n e'n those, even the learnedst and wisest men (as Gardiner, Heath, and Cardinal Pole) made of my poore service, that although they knew perfectly that in religion, by open writing and privy talk, I was contrary unto them, yett that, when Sir Francis Inglefield by name did note me specially at the council board, Gardiner would not suffer me to be called thither, nor touched elsewhere, saying such words of me, as in a letter, though letters cannot blushe, yet should I blushe to write therein to your Lo'pp. Winchester's good will stood not in speaking faire and wishing well; but he did indeed that for me wheby my wife and children shall live the better when I am gone."

Now, if the chancellor, as Burnett represents, had been so prominently instrumental in conjuring up the tempest of per-

³⁰ The latter part of this statement may be ranked, for accuracy, with that of Dr. Milner, in his *Tour in Ireland*—that Mary never persecuted any of the protestants till two years after she began to reign, when they had excited Wyatt's rebellion—p. 26. Of the many falsehoods which Dr. Milner's polemics have engendered, this is, perhaps, one of the most gross and unfounded. The real fact is, that before Mary had been six months on the throne, the Archbishop of York, the Bishops of London, Worcester, and Exeter, were thrown into prison; and by using only the most ordinary diligence in the perusal of writers of historical research, he would have learned that after the disputes about her marriage had been adjusted, the sanguinary laws against *heretics* were re-enacted.

secution;³¹ in that case, we should have often seen him delivering up the heretical offender to the secular arm; whereas he never came forward for any such purpose, except upon the first persecution after the revival of the statutes, which, of course, he was expected to do, as supreme judge of the highest tribunal. With much show of reason may it, no doubt, be urged that, careful of preserving appearances, he made Bonner his ostensible agent in the atrocities; but we opine, from the constitution of his mind and temper, that, had he been tinctured with the misanthropy of that execrable character, he would have manifested no reluctance to enter upon action from dread of public censure. But, whatever were his motives, if his deeds continued true to his declarations of moderation towards heretics, by them we must judge him; and these will acquit him, at least, of outraging our moral feelings, if they do not go the length of proving that he bore his faculties meekly when firmly seated in power. Had not Burnett been actuated by a desire to aggravate, in every possible respect, the supposed misdeeds of Gardiner, he would have rejected, as a party tale, the anecdote related by Fox—of his inviting the old Duke of Norfolk to dinner, but keeping him waiting some hours, until he had been gratified with the intelligence of the execution of Ridley and Latimer. Now, as it may be assumed as an indisputable fact that the old Duke of Norfolk died twelvemonths before this invitation is said to have been given, it is unnecessary to make any additional observations on a tradition which, the Roman Catholic historian justly remarks, was “palmed on the credulity of the martyrologist.”³²

In one or two instances, Burnett seems to acknowledge the merits of Cardinal Pole. Speaking of the synod held in 1555, by him, for the regulation of matters relative to the Roman Catholic religion, he observes, “By all this, it may appear how well tempered³³

³¹ Not much dependence is to be placed upon Burnett's assertions respecting the persecuting propensities of Gardiner, when we recollect that in the five bishoprics where there was so much protestant blood-spilling, the diocese of Winchester was one of the bloodless cast. This fact Burnett, in common fairness, should not have overlooked, when he enumerated in his tables the yearly burnings of the protestants under Mary. It was due, also, from Burnett, in strictness of justice, when he accuses Gardiner of want of compassion, to have remembered his conduct towards the Duke of Northumberland.

³² Strype's Eccles. Mem., vol. vi., p. 29.

³³ It has, however, been affirmed by some writers, that the cardinal contrived the whole system of the Marian persecution, inasmuch as he is said

the cardinal was; he never set the clergy to prosecute heretics, but to reform themselves." The foregoing passage has extorted the praise even of Dr. Milner. The following misstatements would have no less provoked his displeasure:—"I make no doubt," says Burnett, "that Pole acknowledged the king as supreme head of the church, because he sat in the lower house of convocation in quality of the Dean of Exeter." But before he pronounces this positive opinion, he should have recollected how distinctly the cardinal states that he was present when the clergy's composition was refused, on the ground of that body withholding their assent to the supremacy, but not when they subscribed to it. If Burnett's assumption, indeed, had been true, doubtless, when the cardinal published his treatise on the supremacy (which he did a few years afterwards), his short-sighted antagonists would not have failed to taunt him for opposing what he had so lately approved. Their silence upon this subject, of itself, is a pretty strong conclusion that his conduct at least involved nothing repugnant to the principles of consistency.

Upon some historical questions, Burnett seems to throw away all doubt at once, where other writers have manifested a considerable degree of distrust, from the circumstances of rational confidence being weakened by the suspicious nature of the evidence or testimony on which they depend. There is, however, more prejudice than sound criticism on the part of our historian, in rejecting, as unworthy of all credence, the account of the interview between Henry and Pole, on the subject of the divorce and second marriage, and in attributing it to the design of Sanders, "to fabricate a romantic adventure, to set off his hero;" when Pole, at the risk of his life, had the stedfastness of purpose to expose to the king the guilt and consequences of the step he meditated, and so far incensed Henry by this bold act "that he thought, at one time, to have drawn his dagger and stabbed him." Every part of the story, as it is recorded by Pole himself, in his letters to Edward VI. and to the parliament, gives new and powerful confirmation of this interview having taken

to have maintained "that no thieves, no murderers, were so pernicious to the commonwealth, as the heretics; that no treason was to be compared to theirs; and that they were to be rooted up like brambles and briars, and cast into the fire." There can be little doubt that he had a chief hand in the attempts to depose Henry, and to restore the ancient faith. This treason is applauded by his panegyrical biographer, Phillips.—*Life of Pole*, Sect. iii. Perhaps the best vindication of the cardinal's treason, are the sufferings which he and his family endured from the tyrant.

place. We do not, therefore, see how Burnett can stand excused of great injustice to the memory of the cardinal, in regarding the whole story of the meeting as an absolute falsehood, especially after Pole's solemn appeal to the tribunal of God³⁴ for the veracity of his statement, and his wish for the uniform tenor of his life to be made the test by which his good faith should be tried; unless he could be convicted of being a man who wrote to deceive, and whose assertions, even when ratified by the most sacred obligations, were not worthy of consideration.

We here close our examination of a work which its author lived long enough to see in possession of that popularity he was so naturally ambitious to secure.³⁵ Not fewer than eight editions were published during his life-time; while its value was justly appreciated, and warmly acknowledged, even by those detractors of clerical merit, who had reasoned themselves into a belief that a churchman cannot undertake an ecclesiastical history without pleading more for the interests of his order than the interests of religion.³⁶ In

³⁴ "Testoc tribunal Dei, apud quem, si falsa dico, reum me æternæ pœno judico."—(Epls. Pole ad Parliamentum). "Sed neque de hoc, neque de aliis mihi fidem adhiberi postulo, nisi reliquæ meæ omnes actiones, quæ in-hujusque diem sunt secutæ, idem semper testimonium."

³⁵ "In his Enquiry into the Reasons for Abrogating the test imposed on all members of parliament, offered by Sam. Oxon," the bishop thus alludes to the widely-diffused circulation of his volumes:—"The History of the Reformation sells still so well, that I do not believe Mr. Chiswell, the printer of it, has made any present to this reasoner to raise its price; for to attack it with so much malice, and yet not to offer one reason to lessen its credit, is as effectual a recommendation as this author can give it."

³⁶ Some of the tory clergymen, however, were at no pains to conceal their aversion to him and to his writings. One of them, who had the temerity even to make him a theme of obloquy in the pulpit, is, in the following passage, justly rebuked for his insolence:—"To treat Dr. Burnett with the scurrilous and indecent epithets of a man that has made a great bustle in the world, an apostate from the Church of England, a seditious enquirer, a scandalous pamphleteer, and the like, was this due from a minister of the Church of England to the learned Dr. Burnett, who, to his immortal glory, has vindicated the reformation of this church from the aspersion of its enemies, by a history admired by all the world, and done already in several foreign languages?—See a letter to the Rev. John March, *Vicar of Newcastle*, from James Welwood, M.D. In the Political State of Great Britain, vol. ix. March, 1715, his character is thus summed up:—"He had made his name famous in the learned world by several excellent works on various subjects and well merited of the protestant cause, in a particular manner, by his History of the Reformation. But as this work drew upon him the hatred of all the Roman Catholics, so did his political writings in defence of the Revolu-

our age, we, too, have witnessed very honourable testimonies borne, by writers of the most opposite parties and characters, to the *History of the Reformation*; and which is admitted on all sides to be enough, in spite of the acknowledged defects of the work, to immortalise the name of Burnett.

M.R.S.L.

REMARKS ON CLASSIFICATIONS OF THE MAMMALIA;*

WITH A SKETCH OF SIR ROBERT SIBBALD'S "PHALAINOLOGIA NOVA."†

NATURAL HISTORY has of late become, like many of the other sciences, the object of popular illustration, to accommodate its wonders to the perceptions of even infant curiosity; and catechisms of low price, with attractive embellishments, are now within the reach of all the little masters and misses whom the march of intellect has so far advanced beyond their parallels in the last age. While we rejoice at the rapid spread of knowledge among the rising generation, we do fear, however, that the popular science thus disseminated, in wide-spread floods, and in attractive forms, is likely to impair the taste for deeper investigation, and distract the mental energies which might otherwise have been directed to the investigation of single or abstruse branches of knowledge, and the consequent enlargement of the domain of science. Multifarious as are the pursuits recommended in the present day, and varied as are the objects pressed on the attention of the student, it may be doubted whether the subjects offered to his attention are more thoroughly investigated or understood than when the mind was directed to fewer objects, and the scale of knowledge in these was of course much higher. Whatever the ultimate effects may be, it is certain that, speaking commercially, the incitement of an author to pursue

tion of 1688, together with the great share he had in that great and happy event, expose him to the inveterate, unrelenting enmity of the non-jurors."

* Being an analytical account of Wilson's article *Mammalia*, in the "Encyclopædia Britannica, new edition."

† 4to., Edinburgi, 1692.

a particular train of experiments or investigations is now considerably lessened, inasmuch as no book on abstract science or the higher species of literature would at the present time sell to pay the expenses of paper and printing; and an author who should publish with the view of emolument from such works, would be miserably disappointed. Any facts or views which were interesting or new would be *abstracted* or *extracted*, as the terms are, before a week was over, for the benefit of the penny literature and science of the day, and the authoritative volume of the author be left to slumber, untouched and uncalled for, on the bookseller's shelf.

With the exception of some of the more respectable and ably conducted literary undertakings, such is the character of the literature and science of the present time. The *quartos* and *octavos* of the giants of former times have given way to the tiny science and nut-shell volumes adapted, it would seem, to modern intellect. And though knowledge may now be acquired without effort of attention or judgment or memory, in the pictured plainness of popular instruction, we still have a feeling that, to master any one branch of science to any useful purpose, recourse must still be had to the unpictured works of former investigators.

As an exception to the works to which we have alluded, the new edition of the *Encyclopædia Britannica* may be noticed. Without pretending to characterize as they should be characterized the treatises in this store-house of knowledge, by certainly the most eminent men of the day, we beg to direct the attention of our readers to the articles on Natural History which have already appeared in that celebrated work. These are prepared under the superintendence of an able naturalist, Mr. James Wilson, whose contributions to this branch of science are well known to all our readers. To the article *MAMMALIA*, by that writer, we would now direct the attention of those who wish to acquire the most recent information on this branch of Natural History. Illustrated as it is with a series of beautiful engravings, of nearly all the genera, we do not know any work of the same extent which gives so much information as to the structure and habits of this prominent class of animals.

After a historical account of the different writers on animals, from Aristotle, the father of Natural History, down to the present time, Mr. Wilson gives a short notice of the principal systems of classification proposed by the most eminent authors; and some necessary details regarding the general structure and habits of this class of animals.

The arrangement Mr. Wilson adopts is that of Baron Cuvier,

with some slight modifications, which it is not necessary to point out. Cuvier, we need scarcely remark, adopted the leading features of the Linnæan classification in the *Règne Animal*. But Mr. Wilson, indignant at MAN being in these, and in most other systems, placed at the head of the animal creation, and in relation to his physical structure connected with animals which suckle their young, boldly asserts the right of man to stand alone, an isolated individual, in no respect connected with the irrational objects of the creation around him as they are with one another. For our part, we feel no particular complacency in the idea, supported by some naturalists, that man is but the civilized head of a family of animals which includes the race of apes and monkeys; and we are not flattered by the idea which holds out the speechless and four-handed denizens of the forest as man in a state of nature—untaught and uncivilized—and as the origin of the present races. But while we consider it useless to deny a manifest resemblance in many parts of the animal structure approaching to that of man, it by no means follows that even identity of structure might not exist without reason and the use of speech—the characteristics of man, and man alone. We smile at the absurdities of those who see the likeness of “the human form divine” in those tailed or tail-less animals most nearly approaching the human race in material structure, or fancy they can trace any chain of connexion between the most degraded races and the orang-outang. In our view, man is not an isolated being, but one which connects mind and matter—animal, with spiritual existence. And while he is assimilated so far to the creatures below him, in bodily structure and in physical wants, to soften the rigour of his domination over them—his moral and intellectual faculties, on the other hand, equally connect him with the world of spirits. While the present scene is the ultimate destination of the lower animals, and the amenities and pleasures of life their only source of enjoyment, man looks backwards and forwards, and the past and the future, as well as the present, influence his conduct. His mind ranges beyond space and time, and he feels and knows that immortality is an attribute of his being. Notwithstanding all this, we see no great impropriety in arranging man, considered as a physical being, at the head of the animal creation, and distinguishing him by placing him in an order by himself, characterized by the term BIMANA. On the other hand, we are quite satisfied at Mr. Wilson’s removing our race as far as possible from the four-handed simulators of human actions, which naturalists place in the next order, that of QUADRUMANA.

In an article such as the present, designed to give a compendious view of the great class MAMMALIA, it is not to be expected that all the species are to be described in detail. Mr. Wilson has, however, in addition to accurate descriptions of the principal species, particularized the later discoveries, and given authentic accounts of animals formerly less known than at present. The establishment of zoological gardens at the metropolis and elsewhere, affords opportunities of observing the habits of animals which few have an opportunity of seeing in their native haunts; and from these and similar sources we may expect to derive much additional and interesting information in regard to the structure and habits of this class of animals.

In the order QUADRUMANA, we find an interesting account of the Chimpanzee, or black orang of Africa (*Simia troglodytes*, Linn.), illustrated by a very good figure. It is rather a singular circumstance that the young alone of this species, the nearest allied to man in physical conformation, should have been seen by naturalists. Of another species of gigantic size, the red or Asiatic orang (*Pithecius satyrus*), a number of interesting particulars are given. Young animals of this species have been more than once made the subject of observation, but, with a single exception, the adult animal has not been seen or accurately described. The adult animal alluded to was killed on the north coast of Sumatra, and was described by Dr. Clarke Abel.* This gigantic animal was upwards of seven feet and a half in height. Its head, hands, and feet, are represented in the *Journal of Science*, from drawings sent from Calcutta; and the hands and feet are delineated in Wilson's *Illustrations of Zoology*, (vol. i.), from accurate models in the museum of the Royal Society of Edinburgh, where also a model of the under jaw and of a canine tooth are to be seen. A young animal of this species was exhibited in Edinburgh in August, 1832. A model of another young individual is in the museum of the Royal Society; and in the plates which accompany the article *Mammalia*, a very characteristic likeness is given. None of the young of this species have ever survived so long in confinement as to attain any thing like their full development.

The second order, or FERRÆ, Mr. Wilson, in the outset, separates into four divisions, viz. *Cheiroptera*, *Insectivora*, *Carnivora*, and *Marsupialia*; but afterwards, very properly in our opinion, forms the marsupial animals into a *third* order. We prefer, with

* *Edinburgh Journal of Science*, vol. iv., p. 193-99.

Temminck, that arrangement which places the bats and pouched animals in separate orders, and includes all the carnivorous animals under the old term *FERRÆ*. These animals, emphatically termed beasts of prey, naturally arrange themselves into three inferior groups, according to their food and mode of life, under the heads of *Insectivora*, *Carnivora*, and *Amphibia*.

In speaking of the dog, Mr. Wilson considers, at considerable length, the question as to whether the domestic dog originates from a single stock, or from an union of congenerous species. Naturalists are not yet agreed as to this point; and the wolf, the fox, the jackall, and the hyæna, have all been referred to as the probable origin of the domestic races. Buffon refers all the present varieties of the dog to the shepherd's dog, as most approaching, in his opinion, the primitive race; but the shepherd's dog and the wolf-dog are thought, by Pallas, to derive their origin from the jackall; while he regards the mastiff as more nearly allied to the hyæna, and the terrier to the fox. Mr. John Hunter,* in 1787, endeavoured to show "that the wolf, jackall, and dog, are all of the same species," and gives several instances of *prolific crosses* between the dog and wolf, and the dog and jackall; this being considered by him as the surest test of the animals being of *one species*. He was not aware, however, of any well-authenticated accounts of the fox and dog breeding together; and for this reason, as well as that they differ considerably in their habits, he was inclined to consider the fox as of a different species, but belonging to the same genus. Mr. Wilson discards the hyæna as being one of the stocks of the domestic dog, inasmuch as it does not even belong to the genus, being distinguished by "having five toes on each foot, and five molar teeth on each of the upper jaws, and seven on each side of the under." Mr. Wilson, following Hunter, also rejects the fox, because its "habitual character and instinctive habits" are different; because "it is a wary, silent, nocturnal animal, of sly and solitary habits, never congregating or hunting in packs;" and because the pupils of the eyes of the fox are oblong, whereas in the dog they are round. He gives the strongest reasons, however, for considering the dog as originating from the wolf in the more northern, and from the jackall in the more southern regions of the world, "and that the intermediate varieties have sprung from an intermixture of the jackall dogs on the one hand, and the wolf-dogs on the other, afterwards

* *Phil. Trans.*, 1787, p. 253-66.

crossed and commingled in many conceivable ways, both by accident and design."*

While we cordially agree with John Hunter, and also with Mr. Wilson, in considering the dog as of a mixed race, and not a species, the original of which is now lost, we cannot subscribe entirely to their limitation to the wolf and the jackall as the sole origin of the domestic races. We have more than once had occasion to see prolific crosses between the shepherd's dog and the fox in this country; and several of these crosses are still, it is believed, to be seen in different parts of Lanarkshire.

Belonging to this order is the *Felis maniculata*, interesting as being considered the origin of the domestic races of cats, of which a characteristic figure is given.

The next order is the MARSUPIALIA, or those animals which are provided with a pouch for the protection of their young. Before the discovery of Australia, naturalists were only acquainted with the pouched animals of America, included under the genus *Didelphis*, and commonly known by the name of opossums. One of the chief peculiarities, indeed, of Australia is, that no less than two-thirds of the quadrupeds are marsupial, and make their way with more rapidity by springing in the air than by running.

The order GLIRES, RODENTIA, or Gnawers, includes many animals whose skins form an important article of commerce. This order is treated of at considerable length; and interesting notices of several of the species are given, with anecdotes illustrative of their peculiar social habits and instincts. The power of hybernation, or passing the winter in a state of sleep, exists in its greatest perfection in this order of animals. Many of the species, inhabiting countries which are annually bound up with frosts and snows of some months' duration, retire to their burrows on the approach of winter, and pass that inclement season in a state of sleep or stupor. A few species occasionally awake from their long sleep, and on the occurrence of milder weather show themselves at the entrance of their burrows; and these species are remarked as being those which provide a stock of food during the summer and autumn months, which they consume during winter. Many species, however, make no such provision, and after retiring to the burrows pass the colder months in a state of continued sleep, till the warmth of spring again recalls them to a state of activity.

* *Quarterly Journal of Agriculture*, vol. i., p. 552.

The fifth order, the EDENTATA, contains, as a distinct tribe, under the title *Monotrema*, those singular animals, peculiar to Australia, the echidna and ornithorhynchus. We have no well-ascertained facts with regard to the mode of reproduction of these animals; and the investigations of anatomists have not yet decided the question.

Mr. Owen,* of London, has by his dissections thrown most light upon this subject. He has very satisfactorily pointed out that the female of the ornithorhynchus possesses organs fitted for the secretion of a lacteous fluid, with this anomalous structure, however, that there exists no nipples, but that the ducts leading from the "elongated subcylindrical lobes open upon the surface of the cuticle, forming an areola of an oval shape, but without being raised above the surface of the surrounding integuments." At a later period, Mr. Owen† published an account of the different appearances of the ovum in a certain stage of development, but not so far advanced towards maturity as to enable him to ascertain whether the animal deposits the ova in the form of eggs, as has been vulgarly affirmed, or whether, as he conceives to be more likely, they are hatched within the body of the mother." He remarks that in every essential particular, the monotrematous ovary, up to the full stage of development, is the same as that of the ordinary mammalia, and its structure is in exact physiological correspondence with the mode of nourishment of the young animal. After describing minutely the ova themselves, as found in the uteri of several gravid females he dissected, he makes a number of general observations on the probabilities of the ova being deposited as eggs, and of being hatched within the body of the mother; and whilst he acknowledges that the ova present, in many respects, the structure which "is compatible with, and perhaps favourable to, the opinion" that they are excluded as ova, and developed out of the body of the parent, he gives strong reasons for leaning to the other opinion.

Mr. Owen objects to the oviparous theory, because the bones of the pelvis are incapable of allowing of the passage of a large body like an egg, which must contain within itself all the elements for the nourishment of the young. Besides, the yolk of the egg of the bird never increases in bulk during its passage through the Fallopian tubes, having merely the albuminous portions added to it there, having acquired its full development previous to its separation from the

* *Phil. Trans.*, 1832, p. 517-35.

† *Phil. Trans.*, 1834, p. 555-66.

ovary; whereas in the ornithorhynchus the ova of the specimens examined had evidently acquired a great additional bulk after having traversed these tubes. From this and many other arguments, he concludes that it is probable that "the *Monotremata*, like the *Marsupialia*, are essentially ovoviviparous;" and he adds in a note the known fact, which tends to strengthen his opinion, that "the kidneys occupy the characteristic position of the mammiferous type of structure, which allows free space for the enlargement of the uterus during pregnancy."

The sixth order, the *PACHYDERMATA*, divided into three tribes, the *Proboscidea*, *Pachydermata proper*, and *Solidungula*, contains the giants of the quadrupeds. In this order are found three animals highly useful to man, viz. the elephant, the hog, and the horse. These are too well known in their history and habits to render it necessary that we should notice them further.

The seventh order, the *PECORA*, or ruminating animals, contains all the animals most important to man, with the exception of the horse, dog, hog, and elephant; and Mr. Wilson describes those which are interesting either from their value to man, or from their peculiar habits.

We now come to the last, and not the least interesting order of the mammalia, viz., the cetacea, or fish-shaped mammalia. Mr. Wilson enters into the details of this order at much greater length than he has done with regard to any of the others, and shows throughout a most intimate knowledge of the subject. We were pleased to observe, too, that all the known species are described.

This order is divided into the *Herbivorous* and *Ordinary Cetacea*. The first of these consists of three genera, the *Manatus*, *Halicornes*, and *Stellerus*. These two last possess this peculiar conformation of structure in the heart, that the ventricles are completely detached from one another—a structure not met with in any other animals.

The ordinary cetacea are treated of under three sub-divisions, the *Delphinææ*, *Heterodontes*, and *Great-Headed Whales*. Under the *Delphinææ*, nine genera are described. The first genus (*Isis* of D'Orbigny), includes a single species, the *I. Boliviansis*. This animal is an inhabitant of rivers and fresh-water lakes, tributaries of the Amazons, 2,100 miles from the sea, being the only one of the cetaceous tribes possessing this peculiar habit. The *Soosoo Gangeticus*, an analogous species, frequents chiefly the creeks and inlets of the sea, though it is occasionally met with in the Ganges, 100 miles from its

mouth. The *Inia* is particularized by having the beak cylindrical and bristled with long coarse strong hairs, a character which has not been remarked in any other of the Cetacea. These animals unite in little troops of three or four individuals, they are observed to raise their snouts out of water when devouring their prey, which appears to consist entirely of fishes.

In the sub-division *Heterodontes*, four genera are described, besides a doubtful genus; whilst under the third sub-division, or *Great-headed-whales*, are included three genera.

In speaking of the Great Northern Rorqual (*Rorqualus borealis*), Mr. Wilson explains the probable use of the longitudinal plicæ or folds, nearly parallel, which commence under the lower jaw, pass down the throat, cover the whole extent of the chest, and terminate far down on the abdomen. His explanation is this: "The rorqual has not in the upper jaw, that large segment of a circle in which the *mysticetus* collects its food; but to compensate for this it has it in the lower; for when it opens its prodigious mouth, the water rushing in opens these folds, and so forms a vast well in which its supplies are collected. On shutting its mouth and contracting the fold the water is expelled, whilst the strainer formed by the baleen retains the captured fish, which, entangled as it were within the meshes of an enormous net, becomes an easy prey."

In the *Rorqualus rostratus*, another species of this genus, Mr. Wilson quotes Dr. Knox's description of a particular apparatus which exists in the blow-holes, and which he appears to regard as new. Dr. Knox's description is remarkably short and imperfect; we give it in his own words: "Two bolster-like substances filled the blowing-canals, which are drawn from them, at the moment of breathing, by muscles provided for that purpose; the mechanism is admirable, and would sustain a pressure from above, though the animal were to descend thousands of fathoms."* We have some doubts whether these "bolster-like substances" are anything more than the *valves* so distinctly described by Pallas, Baron Cuvier, Lacépède, and more lately still by Scoresby. They are described by Pallas as "projecting bodies, about two inches thick, composed of a network of tendinous fibres hard as wood, and scarcely capable of being cut with a knife; two strong muscles, rising from the frontal bone, and peculiar to the tube, acting on these bodies, most effectually shut them down, and so secure the canal." Baron Cuvier describes them as fleshy valves

* Proceedings of the Royal Society of Edinburgh, 1834.

situate at the upper or external orifice of the two osseous nostrils, which are closed by means of a very strong muscle, which lies over the intermaxillary bone. Lacépède's description is in nearly similar terms. Scoresby* describes the mechanism and appearance in the "true whale" thus: "In front of each blow-hole, on the upper part of the skull, is found an oblong cavity, which is the seat of a muscular substance, attached by its anterior extremity to the surface of the skull, and by its posterior and inferior extremity to the interior of the skull, at some depth in the blowing-canals. The part of the muscle which penetrates the bony canal is of a conical form, the apex downwards; so that, when the inferior portion contracts, the muscular cone is drawn tight into the orifice, and completely closes the breathing canal; while the action of the external part of the muscle draws the conical part forwards and upwards, and affords a free passage for air in respiration. It is this beautiful structure," says he, "which enables the animal, under the immense pressure to which it is exposed, to exclude the sea-water from its lungs; so far from the water being forced down the canals, the enormous load serves only more effectually to press down and close the valves that defend the passages to the lungs."

We cannot conclude our short remarks on the cetacea without noticing a much disputed point in the history of these animals, viz. whether the spoutings, or *jets d'eau*, are caused by the rejection of the water which is taken in along with their food; whether it is merely the natural moisture or exhalation of the air passages; or lastly, whether it is not a layer of water carried up from the surface of the ocean by the air as it escapes from the blow-hole, when the animal is rising to the surface to breathe.

Without entering into details on this point, it may be stated that, at the present day, the opinions of authors are still divided between the two first of the above theories, though some are inclined to adopt the two-fold explanation of Desmoulins, that "it is not water, but mucosity, which is expelled by the blow-holes during expiration; the animal spouts water only after deglutition, or in moments of rage." Mr. Wilson is inclined to adopt this last explanation.

Now it appears rather strange that this difference of opinion should prevail with regard to a fact which comes so frequently under the observation of the mariner, and still more so when we consider how easily the matter might be set at rest by an examination of the

* Journal of a Voyage to the North Whale Fishery, p. 152. Edinburgh.

anatomical structure of the blow-holes, in those species which are observed to possess the property in question. Many species are never observed to throw up jets, and of those in whom this property is noticed there are great differences; so that the fishermen, who are engaged in the capture of the larger species, are enabled to recognize the species before they come near to it, from the direction, the general appearance, or the height of the jet. It is unquestionable, therefore, that some slight modification of the mechanism by which this is effected will be found to exist.

The organs destined for this purpose consist of two large membranous sacs, formed of a dark-coloured mucous membrane; wrinkled when they are empty, of an ovoidal form when inflated. These sacs are situate beneath the skin, before the blow-holes, with the upper part of which they communicate. Very strong fleshy fibres, arising from the circumference of the skull, and uniting over these sacs or pouches, compress them strongly at the will of the animal.

When a cete wishes to throw up a jet of water, it gives to its tongue and jaws the movement requisite to swallow the water, but as it closes, at the same time, its pharynx, the water is forced into the blow-holes. The rapid movement of this highly-compressed water raises the fleshy valve (above described), which is situate in the upper part of the blow-hole, but below the pouches or sacs; and when the animal compresses these sacs the water is forced out by the upper orifice of the blow-hole—the valve preventing the water from again descending to the mouth—and is elevated into the air to a height proportioned to the force of the compression on the sacs.* It may be mentioned that the upper extremity of the gullet of the cetacea is peculiarly adapted to allow of this function taking place, inasmuch as when (in tracing it from the stomach upwards) it approaches the larynx, it is found to divide itself into two conduits or tubes, one of which communicates with the mouth, and the other with the blow-hole.

Such is a general description of the organs which enable these animals to throw out at will a jet of water: and we are rather surprised that Scoresby, whose opportunities of observing and studying the larger species have been greater than those of most naturalists, should have been led into the belief that it was merely the natural mucosity or moisture that was ejected by these animals; and the more so as

* Cuvier, *Leçons d'Anatomie Comparée*, vol. ii., p. 672; and Lacépède, in *Sonnini's Buffon*, vol. 124, p. 42.

he very accurately describes the valvular apparatus above alluded to, and yet overlooks the sacs.

The plates of the Cetacea seem very correct, and finished with attention to scientific accuracy; they are also selected so as to exhibit the peculiar characters of this interesting class of animals. A drawing of the heart of the *Dugony* and *Stellerus* is given, as also facial etchings of the *Dolphinea*, from which the generic characters are taken. We have likewise to mention with praise the etchings of the anatomical peculiarities of the skulls of the great rorqual whale, and the true whalebone whale, as also the different forms of structure of the windpipe in the dolphin and narwhal. The brain of the dolphin is also very accurately represented. We notice these circumstances particularly, because they illustrate much more clearly than mere description, the peculiarities of the different genera; for in a class of animals so little studied and so difficultly accessible, the aid of accurate engravings is invaluable.

As connected with the *Cetacea*, we are rather surprised to observe, that no notice is taken of the observations on this class of animals, by an early and eminent Scottish naturalist, Sir Robert Sibbald; nor is his work even alluded to, so far as we have perceived. Though he minutely describes a rorqual, 78 feet long, cast ashore in the Firth of Forth in September, 1692, yet a modern describer of another animal of the same species, of which the skeleton is preserved, takes no notice of the previous labours of Sibbald. This work, entitled "*Phalainologia Nova*,"* was printed in Edinburgh in 1692, and reprinted in London, at the expense of Mr. Pennant, in 1773; but we believe that copies of the work are not common, and the information it contains little known. Ray availed himself of the arrangement of Sibbald in his *Synopsis*; and foreign authors have also referred with approbation to the Scottish naturalist. Characteristic figures of the principal species described are added, with representations of their teeth and horny laminae.

Sir Robert divides his treatise into three sections. 1. Of the smaller whales, furnished with teeth in both jaws. 2. Of the larger whales, with teeth only in the lower jaw; and 3. Of the larger whales,

* *Phalainologia Nova*; sive observationes de rarioribus quibusdam Balænis in Scotiæ littus nuper ejectis; in quibus, nuper inspectæ Balæne per genera et species, secundum characteres ab ipsa Natura impressos, distribuuntur; quædam nunc primum describuntur; errores etiam circa descriptas deteguntur; et breves de dentium, spermis-ceti et ambræ-griseæ ortu, natura et usu, dissertationes traduntur. 4to., Edinburgi, 1692.

which have horny plates in the upper jaw. Under the first head he describes the grampus (*Delphinus orca*) two of which were thrown ashore near Culross in 1691, and five or six near the royal castle of Blackness, on the opposite coast. The round-headed Cachalot of Pennant, to the number of a hundred and two, were stranded at Cairniston, in Orkney, a short time before he wrote; and in 1690 twenty-five small whales, from ten to twelve feet long, "*de incertæ classis*," were grounded at Cramond island, in the Firth of Forth.

The second section includes the whales which have teeth only in the lower jaw. The first of these is the *Balæna macrocephala*, with two lateral fins, often thrown on the shores of the British islands. 2. The *Balæna macrocephala*, with a third or dorsal fin, and falciform teeth in the lower jaw (the great-headed Cachalot of Pennant.) A male of this species was stranded at Limekilns in February, 1689. 3. The *Balæna macrocephala tripinni* (the high-finned Cachalot of Pennant), was cast ashore on one of the Orkney islands in 1687.

The third section, which treats of the larger whales with horny plates in the upper jaw, includes, 1. Whales with two fins, with or without a blow-hole. This includes the common whale, of which an individual seventy feet long was cast ashore near Peterhead in 1682. Another individual of the same species, eighty feet in length, ran aground at Limekilns, in the Firth of Forth, in the year 1652.* 2. and 3. Three-finned whales, with nostrils, a prolonged beak, and folds on the belly. In November, 1690, one of these whales (the pike-headed whale of Pennant), was cast ashore at Burntisland. It was forty-six feet long. 4. Of a three-finned whale, with the lower jaw round, and much broader than the upper jaw. This is the round-lipped whale of Pennant, of which an individual was cast ashore near the castle of Abercorn, in the Firth of Forth, in September, 1692. It was a male, and seventy-eight feet long. This species is minutely described, from measurements and inspection, by Sir Robert, although Dr. Knox, in his description of a similar animal, does not allude to its previous occurrence on the Scottish coast. 5. Of the whale lately cast ashore at Boyne, in Banffshire. Its body was said to have exceeded eighty feet in length, not including the tail. It had horny laminæ in the upper jaw.

We should have sooner noticed the articles in the "Encyclopædia Britannica" on the natural sciences, had we not been deterred by the

* The jaw-bones of this individual were preserved in a garden-walk at Pitfirran. Is it possible that they still exist?

certainty of not being able to do justice to the authors within the circumscribed limits of a notice. One of the earliest articles—that on ANATOMY, human and comparative—demonstrated that contributors were to be found equal to those who first raised the character of this work to its high pre-eminence; and the subsequent articles on this class of subjects have brought the sciences to the level of the present day, in a manner highly creditable to the publishers. Several of the treatises have been printed in a separate form, and amongst the rest the article ENTOMOLOGY, by Mr. James Wilson, which is one of the clearest and best introductions to this delightful study we have met with.

We cannot conclude without adverting to the beautiful engravings by which these treatises are illustrated. The figures of the mammiferous animals are highly characteristic in their attitudes and expression; and, what is of great consequence, outlines of the skulls of most of them are added. This is an addition of much value to the student, as the characters of the families, as to their food and manner of life, can be ascertained by inspection of the jaws alone. Most of the figures in the older works on Natural History, being taken from ill-stuffed specimens, have but a distant resemblance to their living prototypes; but the artists of modern times have much improved in this respect, and the minutest details are now represented with all the fidelity of nature. The manner in which the whole work is got up, indeed, does great credit to the spirited publishers; and we can scarcely doubt that the “*Encyclopædia Britannica*” will retain its superiority, as a dictionary of arts and sciences, when many of the ephemeral publications of the day shall be forgotten.

RAMBLES IN SWITZERLAND AND SAVOY.

CHAPTER III.

THE VERRERIES.—VALLEY OF LA CHAUX DE FOND.—ITS FORMER CONDITION.—LE LOCLE.—VILLAGE OF LA CHAUX DE FOND.—ROAD TO NEUCHÂTEL.—MUSEUM OF NATURAL HISTORY AT NEUCHÂTEL.—POINT-DE-VUE ON THE ROAD TO YVERDON.—YVERDON.—MOUDON.—RETURN TO LAUSANNE.

AT the close of my last chapter, I had conducted the reader to the village of St. Croix, within a very short distance of the canton

of Neuchâtel. It is my purpose now to continue the narrative of my northern excursion through the canton of Neuchâtel, as far as la Chaux de Fond, and then bring the reader back, by way of the city and lake of Neuchâtel, and the towns of Yverdon and Moudon, to my head-quarters at Lausanne.

Perhaps one of the great reasons why the Jura chain has to me so many charms is, that in traversing its valleys, and crossing by rough paths the numerous passes with which it abounds, there is a constant variety in the scenery, and neither the eye nor the mind is ever fatigued by dwelling long on the same set of objects, or even on different objects similarly related. If at one time we complain of the weariness arising from the contemplation of a waste and barren expanse, we are soon cheered by marks of civilization springing apparently from the midst of wilderness; and if, under other circumstances, after wandering among pine forests apparently interminable, we long for a change, and require the lofty precipice and the naked rock, these are not far off. We have but to vary our direction a very little, and in the course of a short time the scene has shifted; and it scarcely seems as if the change is that produced by our own change of position, so completely different is the prospect and so rapid the transition.

At the close of the last chapter, I was complaining of the superabundance of wildness which characterized the scenery between Jougne and St. Croix. On leaving this latter town, however, I entered at once upon a region of forest, and, with my compass as a guide, walked on through a succession of valleys, some more cultivated than others, but all offering sufficient proof of the agency of human exertions. On descending into the first valley, the views were exceedingly beautiful and interesting; for there was abundance of vegetation, consisting both of noble forest trees and smiling corn-fields, every thing being, as usual, at once enlivened and ennobled by the mountains, which rose suddenly and boldly from the flat surface of the valley, and completed the picturesque beauty of the spot. My path lay along the windings of the valley, and for some distance was closed in on each side by the steep face of the mountain rising like a wall both on the right hand and the left. After a time the country became more open; and at a turn towards the north-east the hilly district was left behind, and a considerable extent of table land, commanding views of the French frontier (which is not very far from this road), continued for several miles with but little change, until a small tract of forest again intervened. The trees were just sufficiently thick to hide, till one was close to it,

the abrupt termination of the table land, and the view of a long transverse valley, along which apparently a street extended for a very great distance, formed, in fact, of four good-sized villages united into one. This rather curious string of habitations is called by the single name "*les Verreries Suisse*"—the Swiss Glass-houses. There is, as the name would lead one to expect, an appearance of busy and thriving industry about these villages, which is very pleasing, and gives an air of comfort far surpassing the more quaint and antiquated look belonging to larger towns.

The east and west valley (crossing the principal line of the Jura) in which these villages are built, extends for several miles, and conveys the waters of a few small tributary streams to the lake of Neuchâtel; while advantage is taken of so convenient a pass to form a road from the French town of Pontarlier to Neuchâtel and other cities in this part of Switzerland—a line of communication which, perhaps, in a commercial point of view, may be of considerable importance. In other respects, the valley is naked, ugly, and apparently not very well cultivated, although, indeed, I was told that nearer Neuchâtel, when the river has entered it, the scenery is extremely pretty, and that the road to the Locle by Mornaigne, les Ponts, and la Chaux du Milieu, is far preferable to the certainly uninteresting route by which I arrived at the same spot.

Between the last-mentioned town and le Locle the road improves in interest, but until we come upon the last hill—from which we may look down along the whole extent of the curious valley of la Chaux de Fond—there occurs nothing worthy of particular notice.

The valley of la Chaux de Fond is one of those instances (not uncommon in the Jura) where the natural or accidental draining of a mountain lake has laid bare a small extent of dry land, capable of high cultivation, enclosed on all sides by lofty hills, and without the slightest trace of running water to enliven the rather gloomy scenery of its dark forests. These valleys are not without interest to a genuine admirer of Nature; while to the geologist they present subjects for contemplation, and enquiries for solution, which oblige him to pause even in his most rapid course. Let me, then, be excused if I explain a little in detail the prospect which offered itself to my contemplation when entering the district to which I have just alluded.

I mentioned that, until arriving at the ridge from which one looks down upon the valley, there is little to excite interest in the scenery. The prospect which then opens is accordingly seen to

advantage ; and perhaps something of this kind is necessary, to remind the mere hunter after the picturesque that he is approaching an interesting spot. At all events, there exist no such very striking elements of beauty as to make one long to pause solely to enjoy their effect : it is to its scientific interest that such scenery owes, perhaps, most of its attractions.

The first glance at the valley extending at one's feet is almost sufficient to determine its former condition. We see a long, narrow, and irregular tract of land, nearly level, but rising gradually towards the south—the observer is supposed to be standing at this extremity—and enclosed by highish hills on all sides, rising rather abruptly, and entirely shutting in the level and cultivated area. Towards the north, however, and not very far from our position, is seen a low ridge of irregular hill crossing the valley ; while a little to the south the valley closes in, and is lost in the more decided mountain and forest scenery in that direction.

Between this inferior ridge and the place from which my description is taken, there is a large and handsome village—a village, indeed, in name, but rivalling many towns in France, as well as Switzerland, for population, extent, and commercial importance. This is “Le Locle,” the birth-place, I believe, of innumerable watches and much jewellery, which Paris and other great capitals have the credit of producing, and have even given names to. The houses of the village are built immediately under the hill, to the east of the valley ; and from the multitude of small villas and pretty little clumps of cottages which form the environs, added to the clean white appearance of the whole (owing to a fire which, a few years ago, almost annihilated the place), the *tout ensemble* is exceedingly good and very striking. One does not, of course, expect fine specimens of Gothic or other architecture in such a situation or under such circumstances ; but the churches are pretty, and the one or two other public buildings—such as the town hall, &c.—are not devoid of interest. The houses are large, the inns respectable ; and there is an air of solidity, simplicity, and comfort, which accords with the growing importance of the place, and indicates pretty clearly the condition of the inhabitants.

Passing through the principal street, which was as much crowded with people as if some great fair had been going on, although it was not, I believe, even the market day of the place, and leaving behind me the half-built mansions rising rapidly in the outskirts, I soon crossed the ridge called “le cret,” of which I have already spoken, and came next into the more regular valley, here sufficiently

narrow, with hills rising immediately and suddenly on each side. Then, pursuing my course northward, I arrived before long at the second important village, from which, indeed, the whole valley takes its name—"la Chaux de Fond." It would seem that the lake, which formerly must have occupied all this valley, was nearly or perhaps quite separated by a narrow strip of high ground ("le cret") from the more southern sheet of water, upon whose bed le Locle is now built, just as, at the present day, the pretty Lac de Joux is only united to the Lac de Brenet by the village of le Pont.*

The village of la Chaux de Fond resembles that of le Locle in most respects, but it is larger, the houses are older and more approaching to the picturesque in their pointed gables and irregular forms, and it is situated on a prettier spot, being surrounded by a good deal of wood, and in the neighbourhood of some views of forest scenery, which are beautiful, though on a small scale. It will be interesting to the geological reader, also, to know that there has recently been discovered here a small basin of brownish clay, on part of which much of the town is built, and which contains fossil remains referrible to *Anoplotherium*, *Palæotherium*, and the horse, mixed with *Deinotherium* and *hippopotamus*; thus tending to prove that the date of the last deposit made in this tertiary valley must, in all probability, be the miocene period of Mr. Lyell; a period to which this and some other nearly allied deposits had been already referred as the most probable, from other and very different phenomena connected with the Jura tertiaries.

Leaving the town, or village (if it must so be called), I left at the same time the valley, and followed the road across the mountains to Neuchâtel, crossing in this way two-thirds of the Jura range, and seeing on my way a great deal of the fine scenery characteristic of these mountains. Not many hundred yards from the last house the road begins to rise along a mountain side in a zigzag, and presents many charming views of the cultivated valley beneath, until, having reached the top of the pass, and turning round to contemplate the scene, we have once more a view of the basin-shape of the enclosed country, and a satisfactory idea is obtained of its former condition. We are not here concerned to explain the cause of the draining of the ancient lake formerly occupying this spot, although it may be as well to observe that this event was, in all probability, contemporaneous with, and consequent upon, the gradual and

* See page 28.

successive elevations, which raised the Jura mountains themselves to their present height.

The first ridge upon which we come, in travelling eastward from la Chaux de Fond, may be said to be double, as it is of greater breadth than the others, and it is remarkable for a slight but very interesting depression, which may easily be observed parallel to the principal chain. The cause of such depressions has been explained in an "Account of the Meeting of the French Geological Society at Porrentruy," in the last volume of *The Analyst*.^{*} But the effect in the case before us is singularly beautiful; for, owing, perhaps, partly to the favourable nature of the soil, and partly to the complete shelter afforded by the neighbouring ridges, there is seen a long line of the richest vegetation entirely composed of forest trees, comprizing a singular variety of species, and contrasting beautifully with the extensive and monotonous gloom of pine and fir, which rarely, in the great forests of Switzerland, admit the intrusion of more cheerful colours than their own.

After crossing this first range, the road leads down a steep mountain side, and through extensive pine forests, into a broad valley running for a considerable distance in a north and south direction, and having a pretty, undulating surface, made up, in all probability, of tertiary sand, but capped more or less with a quantity of coarse gravel.

Here, as in so many of the Jura valleys, the dark sombre shade of extensive clumps of fir forms the back-ground to a landscape in which every element of beauty is combined: the waving corn-field and the rich pasture are varied by a few trees which grace the banks of a tiny river, and show here and there, between their branches, a pretty cottage or a village spire rising in the distance.

I must acknowledge myself very susceptible to the charms of scenery like this, which bears some analogy to the pretty, quiet, and comfortable prospect of a true English country village; and when one finds such a prospect dropped, as it were, from the clouds, in the middle of a wild and mountainous district, the pleasure felt is greater from its unexpected discovery.

I lingered some time before quitting this happy valley, and then the road led me, by a steep path, on one side of a deep ravine or gorge, through which a small stream flows, draining some of the interior country, and communicating with the lake of Neuchâtel. In this way I crossed the most easterly of the ranges of the Jura

^{*} Vol. ix., p. 413.

by a wild, rocky, romantic path, and came down upon Neuchâtel towards night, not a little pleased with my adventures, and very much gratified with what I had seen of the Jura in my walks through its mountains and forests.

The town of Neuchâtel itself is old, dirty, and not at all remarkable; some parts of the suburbs are, indeed, pretty, and the new building for the university is plain but elegant: but on the whole there is little to attract the traveller who is merely in search of amusement, and little to induce him to pause if he should take this city in his route. The same may be said of the lake of Neuchâtel: it would, indeed, be considered pretty in another country, but for Switzerland it is certainly dull.

The only object of interest which I found in the town was the museum of natural history; and as I had the advantage of going over this in company with the accomplished Professor Dr. Louis Agassiz, I am enabled to give some account of its contents. Of all the different branches of natural history, this collection is, as one would expect from the known pursuits of Professor Agassiz, most rich in ichthyology, and probably few better or more extensive collections are to be met with in Europe. We find here fish prepared in all imaginable ways; some stuffed, others skinned, many preserved in spirits, and many more most admirably dissected, and presenting a series of skeletons of fishes as rare as they are valuable. Among these, M. Agassiz pointed out to me one which had cost him some weeks hard labour, and was just set up. It was the skeleton of a very large conger-eel, and care had been taken to preserve in their places all the myriad of thread-like bones which characterize animals of this kind. Nothing could be more beautiful as an exhibition, and nothing, perhaps, could show more forcibly the unwearying patience and extensive knowledge possessed by the accomplished anatomist.

The collection of fish comprises, however, by no means, all that is interesting in this museum. There is also a most admirable series of specimens, both rock and fossil, illustrating completely the geology of the neighbourhood, and including very many extraneous and really valuable specimens. There is likewise a good general zoological collection, especially valuable in conchology, and containing all those casts of the interior of recent shells upon which M. Agassiz has spent so much time, and which are likely to be of the greatest advantage in identifying fossils with known genera.

I must here say one word with regard to the great power which a single man of talent may possess, under certain circumstances, in

leading his fellow citizens to perform useful works for science. Such a digression can scarcely be deemed out of place ; for the name of M. Agassiz is so well known in England, that when he is mentioned as the person who has done these things in a second-rate town in Switzerland, it cannot be uninteresting to enquire how they were brought about.

A few years ago Neuchâtel was celebrated indeed for its watches, but beyond this it possessed no flourishing institution, and no man of talent ; nothing remarkable, and nothing to raise it above the ordinary level of a country town. But no sooner did it obtain for a professor the active-minded Dr. Agassiz than stagnation was at an end. Under his superintendence, a new building was erected, containing extensive museums ; and even before it was completed, while as yet the painter and carpenter had not taken their final adieu, we find the arrangements of the contents actually going on within, and not an hour lost in making the scientific stores as available and useful as possible. Notwithstanding all his numerous avocations, public and private—his works, his lectures, his pupils, and his geology—M. Agassiz (the presiding genius) still finds time to urge on at their utmost speed all those engaged in the work of the museum : and it is not a little interesting and surprising to find that, by the energy and talent of this one man, there is obtained for his native town a collection of objects of natural history rivalling many of those in the greatest capitals of Europe, and admirably arranged in a convenient and handsome building prepared for the purpose.

I have said that the lake of Neuchâtel possesses but few features of interest, and certainly the passage by water from one extremity to the other offers nothing worthy of particular remark ; but in travelling by land there is one spot which ought not to be passed over, for the fairy-like effect which, under certain circumstances, is produced. This spot—for it is but a single *point-de-vue*—is situated about half way between Yverdon and Neuchâtel. As the two towns are one at the south, and the other at the northern extremity of the lake, the place I allude to is also equidistant from each end. The view is best seen in advancing from the south towards Neuchâtel, and it is the more striking from appearing suddenly, and without any previous warning. While strolling quietly on, admiring the constantly shifting colours of the lake, and now and then tracing the distant outline of the Oberland Alps, the prospect is changed by a sudden turn in the road towards the land side, caused by a small semicircular indentation ; and we pass along a natural terrace, which, from its singularly regular and perfect shape, one

might fancy had been artificially prepared for an enormous amphitheatre. Immediately behind this, the Jura mountains rise to a considerable height, on a regular slope, and are richly wooded and covered with the most beautiful forest trees. Standing in any part of this natural theatre, we see in front a small extent of richly cultivated land, descending to the lake in numerous and charming undulations, one of them forming a separate hill to the north, crowned with a few firs. Between this hill and the mountains to the south (which there, as also to the north, come quite to the water's edge) is seen a small chateau, old and picturesque; while the smooth calm waters of the lake, glittering in the sun, and reflecting in some places a purple, and in others a bright green colour, are apparently shut in by the trees and mountains, and give an inexpressible charm to the whole scene. But this is only a description of the foreground; the distant prospect is in perfect character, and the pencil of the artist could hardly do justice to Nature's admirable scenery in this spot. On the other side of the lake, which is nearly five miles in breadth, the ground rises gradually for some distance, till a long range of hills, covered with the richest vegetation, forms a noble and appropriate base to the highly picturesque outline of the Bernese and Oberland Alps, whose snowy peaks stand out boldly from the deep blue sky, and are clearly distinguishable from the clouds by their more accurate outline, which, through a Swiss atmosphere, is as perfectly and sharply defined as if their distance were five instead of fifty miles. This one prospect, which is seen to equal advantage, and with but little change, from all parts of the natural amphitheatre, is, to my mind, the redeeming point in the lake of Neuchâtel. There is little else of interest, except, perhaps, the first view of the lake, looking up it from the town of Yverdon, at its foot.

Yverdon itself is pretty, and has an air of comfortable, quiet antiquity, which is sufficiently pleasing. The prospect from its environs commands a view of the whole sheet of water, as far as the eye can reach, towards the north, shut in towards the west by the Jura mountains, and open to the east, so as to allow a tolerable though distant glimpse of the Oberland Alps.

The direct road to Lausanne, through Echales and Assens, presents nothing of interest; but by making a detour by Thierrens and Moudon, we see, perhaps, to as great advantage as anywhere, the characteristics of the sand-stone formation, or *molasse*, as it appears in the southern part of the great valley of Switzerland. I will conclude this chapter with a few words of remark on this route.

Some distance from Yverdon to the east, occurs a considerable hill of sand, and the scenery resembles very much that of the new red sandstone in the middle of England ; all traces of mountains are lost sight of, but the country is rich, pleasing, and well cultivated. Here and there the extremely incoherent nature of the deposit is exhibited by the appearance of an insignificant stream, which has cut its way through the very centre of the hills, and left naked, weather-worn, though still almost perpendicular, cliffs, as monuments of its energy and the little resistance it had met with.

Beyond this, there occurs nothing remarkable till we reach the town of Moudon, which is, without exception, the dirtiest, most uncomfortable, most wretched looking place, that I have seen in Switzerland. The neighbourhood is pretty ; and the road to Lausanne having by this time fallen in with the great high road from Berne, I will not fatigue the reader by informing him upon subjects on which a guide-book would be more useful, and perhaps more accurate. I soon again found myself at my head-quarters in Lausanne.

CHAPTER IV.

THE ASCENT OF THE DENT D'OÛCHE.

THOSE of my readers who, in traversing the lake of Geneva, have not been so blinded by the glories of Mont Blanc as to think all other mountains beneath their notice and unworthy of a place in their memory ; and those especially who have paused at Lausanne, and admired the prospect from the well-known "*signal*" above the town, will hardly have forgotten the outline of the Dent d'Oûche. This mountain—the highest of those rising immediately from the lake—is nearly opposite Lausanne, though a little to the east ; and in fine weather every part of its summit is seen with such extreme sharpness, and it looks as if it might be reached with such facility, and so very soon, that a stranger—particularly if he should feel himself strong and in good condition for walking—feels almost ashamed to shrink from accepting a challenge to exertion so temptingly held out. I should mention, too, that the distance across the lake *appears* as nothing, since one can see the church spire and the houses of a village on the other side, and the different shades of colour, marking the variety of forest trees on the mountain slope,

with as much clearness and facility as in our climate would happen, if the objects were not more than half a mile distant.*

Overcome, then, by the temptation, three friends and myself made up our minds, one fine August day, that the next morning should see us in Sardinia, and that we would manfully, and in spite of all difficulties, reach the wished-for summit before night. Accordingly, in the morning, we started; but—alas for our resolutions!—we had scarcely got fairly upon the water when one of those storms which occasionally come suddenly down from the mountains, without a moment's warning, was seen approaching from the head of the lake; and we had only just time to prepare for the deluge of rain that accompanied it, and were left to debate upon the expediency of returning and giving up our attempt. However, we were English, and could not think of acknowledging ourselves beaten; so resolved to go on, and at all events cross the lake. Before we had got half-way across we were fated to undergo another attack of the elements; and this time we only escaped by cutting a rope, from the effects of a still more violent gust coming in the opposite direction to the former, or up the lake. At length, though not till after a long passage and some danger, we got safely across and commenced our journey, striking at once into the woods, which come down almost to the water's edge. This, indeed, is singular and unexpected, for at a distance the whole district has a gloomy, sombre, and almost barren appearance, utterly inconsistent with the agreeable reality which now presented itself. The forests are made up of all varieties of trees, oak, beech, chestnut, walnut, and many others; and near the straggling villages the vines are trained upon them in the Italian manner, forming a far more picturesque object than the more valuable and regular vineyards of Switzerland.

Every thing announced that we were among a different people. There was a new cast of countenance, a new patois, a change of costume, and a complete change of habits; and although the advantage is, in all moral points, infinitely in favour of the Swiss, yet the rounded or oval face, the intelligent look, and the keen bright eye of the Savoyard, suffered little by comparison with the more careful and steady appearance of his Swiss neighbour.

After walking for some time, constantly ascending, we reached the limit of the forest, and found ourselves about half-way up a low range, of which the upper part appeared, from a distance, to be the

* The distance across the lake from Lausanne to Evian or Toronde (the nearest landing place), is about eight miles.

foot of the more rocky mountain we wished to scale. As it was now raining heavily, we attempted to obtain shelter and provision ; but wine, at least Swiss wine—which was the only wine the people knew of—being here contraband, and any thing like an inn or public-house utterly unknown, we in vain requested admission into the only decent house in the village, and were discussing our plans under the shelter of a broad pent-house, when we were accosted by a good Samaritan, who enquired if we should like some *boiled milk*. Anxious to be initiated into the mysteries of boiled milk, and wondering whether the people lived upon this beverage, we allowed ourselves to be conducted into the interior of a neighbouring hut, where a plentiful supply of soup, eggs, and bread and cheese, were the preludes to a liquor called, on the other side of the lake, *cau de cerises*—though not much resembling the well-known “*kirschen wasser*” of Germany—and a most portentous bottle of an indifferent red wine, all of which enlarged our ideas very considerably as to the nature of Savoy milk.

Having satisfied our appetites, we left these good people, and continued our attempts, but the rain again baffled us. At this altitude the moisture had not condensed into drops, but seemed like mist, the cloud which enveloped us being so thick that no object whatever, at a distance of twenty yards, could possibly be discerned ; and no sooner had this a little cleared than we were favoured with a thunder-storm immediately over our heads, so truly awful that we were but too willing to seek shelter, and give up all thoughts of the Dent d’Oche on that day. Accordingly we turned into a kind of a wretched farm house, and were permitted to warm and dry ourselves in the lower part of a chimney till the cloud had passed away, and the weather was a little more promising. However, it was then quite hopeless to think of advancing, and we descended to sleep that night at Meillerie, a town close to the lake. Next morning the weather was even more decidedly bad, and we were obliged to return to Lausanne without accomplishing our purpose.

It must not, however, be supposed that because we did not succeed on this occasion, the project of reaching the summit of the Dent d’Oche was for an instant lost sight of. As soon as the weather cleared, which it did in a few days, I and one of my former companions again crossed the lake, and, taking a more direct line than before, favoured, too, with most lovely weather, we soon reached the top of the inferior ridge already spoken of, and when we had done so were not a little surprised to see the real state of the case. Instead of being at the immediate foot of the mountain,

which at a distance appears to rise, without any break, from this low range, as a base, we were presented with a most beautiful and characteristic view of the mountainous country we were traversing, and found that there were two intervening valleys of no inconsiderable breadth, and another range of hills, higher than that we had just surmounted, before we should be at the mere foot of the Dent d'Oche ; and that from the foot there was much very severe climbing before we could reach the summit seemed pretty evident, even from the distance at which we were.

I cannot easily express our astonishment at this unexpected addition to our labours ; for until the moment of reaching this first summit there seemed no reason to expect more than a small natural plateau, from which, as from table land, the mountain should rise ; but no sooner had we taken one step beyond the summit than there suddenly burst upon the view one of the most striking, varied, and beautiful prospects of mountain scenery, ever presented to the eye. I will endeavour to give some idea of the nature, at least, of this charming panorama :—Immediately beyond and to the south of our position, was a descent much more precipitous than our ascent had been ; and this terminated in a broken rocky valley, shut in by a bold escarpment of rock, running in a straight line for some distance. To the right this valley widened, and was in some parts covered with corn-fields, and in others evidently used for pasturage, though there was no trace of man and no village in sight. Toward the south-west and west the valley was hemmed in by a great number of separate mountain peaks of the most picturesque outlines, clothed with grass on their summits, but having abundance of pine forest on their steep slopes. Beyond, among, and behind these, arose still higher and more fanciful mountains, naked, rugged, and sometimes just tipped with the most delicate white ; while in the extreme back-ground one might distinguish the mantles of eternal snow wrapping round the shoulders of more lofty eminences, and giving an appropriate finish to the prospect in that direction.

When, after dwelling on this delightful scenery, we turned to trace the valley towards the east, it was seen reduced to a narrow gorge, apparently closed in at no great distance, but, as we afterwards found, really making a turn towards the south, and opening out into another scene of pastoral and cultivated beauty. The view northwards was again completely different, and included the whole extent of the lake of Geneva, and a prospect extending as far as the eye could reach across the cultivated undulations, which render the great valley of Switzerland so valuable and so beautiful.

By the time we left the spot whence all these views may be admired, it was already past three o'clock, and we began to calculate the chances of our not arriving at the summit of our wishes, at all events, on that evening, although we were little aware even then of the distance that still remained. However, we attempted to get on by descending into the narrow gorge, as the first thing was to cross the range which separated us from the view of our mountain. This was a task neither easy nor devoid of danger, as the rock was naked and very precipitous. After some time we reached the bottom, and found it, as might have been anticipated at that season, the dry bed of a water-course. This we traced towards its source for a considerable distance, and at last, after an hour's walk, arrived at one of the chalet-villages used in the summer, when the herds are on the mountains, for the mutual accommodation of men and cattle. Here we feasted upon milk curds and cheese, and might have devoured a quantity of their bread, could we but have persuaded our stomachs that the black, pasty, sour stuff put before us, was *really* bread, and not soft clay. On the whole, however, we did very well, and afterwards crossed, without much difficulty, the second ridge, which had so much annoyed us, and found ourselves, towards sunset, really within sight of the noble mountain to scale which we had taken such pains.

In reaching the plateau from which the *teeth* seem to spring, we had had very severe work ; and by the time we fairly arrived at the spot whence the climbing must begin, the sun was setting, we were far from human habitations, and, indeed, hardly knew where we might find any village to serve as sleeping-quarters for the night. Guessing, in some measure, at the direction, we pushed on, however, and at length saw two neat-looking chalets on the mountain side, not very far off. On arriving at these, we called in vain for some time, but discovered at length that the little settlement, from which we had hoped so much, was deserted. We consulted at first as to whether it would not be better to break open these huts and make sure, at all events, of the *shelter* they would afford ; but seeing a light in the distance, it was finally resolved that we should make for that, and try one more chance. This light, fortunately, proceeded from another chalet, which we reached with some difficulty, and found inhabited by four men, who were smoking and drinking as they sat in bed, nearly naked, in an atmosphere which more nearly resembled that of the inside of a kettle of boiling water than any other that can be conceived. Comfortable as they were, however, these really hospitable people did

not hesitate to do all in their power to assist us. One of them got up and accompanied us some little distance, leading us to the path—that is, the water-course; by following which, we were told, we should in time arrive at a village. We parted with our good-natured friends, and attempted to keep in the direction indicated; but it soon appeared that although a stream of water might be a good guide, it was a bad companion; for, besides being very noisy and talkative, it was too much given to put itself in our way at sundry little turns to make us anxious to keep up a closer acquaintance than was necessary. A pine forest, too, which we next came to, increased our difficulties, for the trees grew quite down to the water's edge; and to thread our way without continually walking through deep pools of water, was by no means an easy task. However, a dark night and the prospect of shelter, to say nothing of sundry intimations of the expediency of supper, reconciled us to a walk which, I really think, few would have attempted in broad day-light.

Our efforts were rewarded with success; for we at last discovered an artificial arrangement of planks, forming the rudest of bridges, and, satisfied with this indication of man, we went on more cheerfully, until my companion distinguished at a distance, against the clear blue sky, certain leaves and branches which he decided must belong to a cherry-tree. His conclusion proved well founded, and the sight of a chimney not long after told us how nearly we were approaching the termination of our labours.

We soon made known our wants, and on explaining that we were benighted travellers, the good people put fresh sticks on the fire; for even in the height of summer the evenings are cold on this mountain district: and we all sat round the low hearth, discussing the best thing to be done; the good people regretting that they had no accommodation to offer, and advising us to go on still to the village, which was not more than a quarter of an hour distant, and where we should be more comfortable than any where else in the neighbourhood, since there was a house built of stone, and belonged to a rich and very important person. As our informant had really no room unoccupied in the place of his present abode (though he himself was also an important person—vice-syndic of the commune—and residing for the summer in his *villa*, not without an eye, most likely, to the preservation of his flocks and herds), we made up our minds to proceed, but were not suffered to depart alone, as M. le Vice-Syndic insisted upon walking with us the rest of the way, lest any other mistake should be made. We arrived, therefore, in due time, at the village, and parted with our guide on the most friendly

terms, after he had done us the kindness of pointing out, among the few miserable cabins, that which was constructed of hewn stone, a luxury of building evidently looked upon as quite unusual. We soon obtained entrance into this noble mansion, though not without some alarm, when we first entered, lest we had, by mistake, violated the sanctuary of the pig-stye, but that it was only the kitchen was soon made evident by the savoury fumes of garlic saluting our hungry nostrils. As soon as our eyes had become accustomed to the darkness visible of this smoky interior, we saw seated around a wood fire three complete generations of sturdy Savoyards.—There was the aged grandfather, and the still more antiquated looking old crone of a grandmother, far past all active exertion, but leaning over and enjoying the genial warmth of the dying embers. Those of the middle generation were more actively employed, preparing the evening meal for the family; while the younger party of boys and girls were all busy picking hemp.

Our entrance hardly disturbed the arrangements: it was evidently quite a matter of course that, if we were travellers who had lost our way, we should take up our lodging with them; and about the first question asked us was, not if we would take supper, but if we liked onions in our soup. Having answered this important question satisfactorily, we soon saw the process of cookery commenced. The copper stew-pan was placed on the fire, a lump of fat first put in, then a large onion carefully sliced into the fat, and afterwards about a tablespoonful of meal stirred into this curious mixture. When the ingredients had been properly mingled into one harmonious whole, about two quarts of water were added, and the mess stirred till it boiled. Then a few slices of bread concluded the important process, and our supper was prepared. Afterwards we were provided with a very tolerable bed, and next morning breakfast, to enable us to contend with the fatigues of the day. We started early, beginning the ascent by following a very steep road along the flanks of a fine forest, and just at the edge of a deep rocky gorge; and in the course of an hour we had worked our way round the upper part of this gorge, by the aid of an intelligent little Savoyard, whose bright laughing eye, clear dark complexion, and round face, were well set off by his picturesque rags, and appropriately crowned by the broad-brimmed straw hat universal in this part of the country.

This little fellow seemed well acquainted with the wild animals inhabiting his native forests; but our medium of communication was not so complete as to enable us to gain all the information we wished. The Savoy patois one might fancy to be a mixture of

French words with Italian pronunciation, and Italian words sounding like French ; and it is almost incomprehensible without great practice. However, we learnt that bears, wolves, badgers, wild cats, hares, and foxes, are all occasionally met with ; and there can be no doubt that these extensive and almost impenetrable forests, quite untrodden by man, must shelter abundance of game ; since the absence of the great enemy—man—requires and allows of the existence of a considerable variety of inferior ones. On our way up the side of the gorge we saw many waterfalls, and heard many more. Few sounds are more striking, or break the stillness of an uninhabited district with finer effect, than the rush of falling waters, mingling with the hoarse murmurs of the wind, moaning and sighing as it passes through extensive and unbroken forests, and sweeping along without anything but rocks and trees to impede its course.

Having reached the upper part of the gorge, we now found ourselves about a mile from the elevated plateau, out of which the principal peaks called the Dents d'Oche seem to spring, rising, as they really do, like enormous *teeth*, and looking so precipitous on all sides that, even when one is close to them, there is no apparent means of reaching their pointed summits.

It would be difficult to describe these singular peaks more accurately than by comparing them to the triangular serrated teeth of some kinds of sharks, as they are naturally set in the animal's jaw. The highest of the peaks rises, perhaps, as much as a thousand feet above the plateau, and the two others are also of very great height. Their nearly vertical faces are in an east and west direction ; and although they appear nearly as unapproachable on the one side as on the other, it is towards the south that the ascent must be made, and it is an ascent not without great danger and extreme difficulty. We hired a guide from a neighbouring chalet, and soon commenced climbing. The first part of the way is comparatively easy, and is marked by a foot track for sheep, goats, &c. ; but this, after a short time, ceases, and then one is obliged to get on in any way upon hands and knees ; sometimes crawling over sharp loose stones, at others, sinking in the crisp, lately-fallen snow ; and occasionally stepping cautiously upon tufts of coarse, wet, slippery grass, which threatened every moment to give way beneath our feet. After advancing for about half an hour in this way, we reached the first summit, and had then to complete our labours by crawling carefully along a narrow ridge of not more than four or five feet in breadth, with a precipice on each side descending almost perpendicularly to a

distance of several hundred feet. By advancing along this parapet, we at length attained the highest point.

The view from the summit is, of course, very extensive, and towards the Swiss side of the lake of Geneva almost boundless; but towards the south the intervening mountains are too near and too lofty to allow of our having that view of the valley of Chamounix and the Mont Blanc which we had fondly anticipated, and which, perhaps, more than anything else, excited us to overcome all difficulties. We had, indeed, no lack of mountains to amuse us; for the whole country, for many miles, and farther than the eye could reach, is without the slightest vestige of plain ground, or even of a valley with a greater width than a few hundred yards. There was a great deal of snow upon the sides and tops of the neighbouring peaks, and the mountains in the distance were some of them completely covered. Our altitude was about 7,800 feet above the level of the sea; and the number of elevations—between six and eight thousand feet—which occur within the circuit of a few square miles, render the prospect from hence, perhaps, more extraordinary, than, though not so striking as, that from other and more celebrated *points-de-vue* in the neighbourhood of higher mountains.

During the whole morning that we spent upon the ascending and admiring part of our day's journey, we were favoured with the most beautiful weather imaginable. While on the top, we saw several small clouds at a great distance beneath us, some of them so exceedingly delicate in their structure, that the outline of a mountain, or the colour of a forest, could be seen through them. It was very pretty and interesting, to watch (as we had the opportunity of doing) the gradual formation of a cloud out of the thin mist constantly rising from the forests, when the sun was shining brightly and warmly upon them. At first, a greyish tint, giving the slightest conceivable obscurity to the outline of the dark-green patch of forest, was all that could be noticed. Soon this would become more decided; and the warm vapours, slowly condensing, presented a flocculent appearance, which, in a very short time, became more decidedly cloud-like; and before long would move off bodily in a shape somewhat resembling that of the frame-work upon which it was formed. After a time, the same thing would take place again; and thus the moisture be gradually evaporated from these great receptacles, which were thus again ready for the subsequent rain, when their produce is once more returned to them.

The descent was not, as we feared it might be, more dangerous than the ascent. Our guide took us to a spot where the action of

the weather or some other natural cause, had worn away the rock in one place ; and the stones and debris being very abundant, and lying upon the face of the precipice with a natural inclination, we could, by merely planting our feet firmly, descend by our own gravity at a moderate pace, and thus slide down a declivity which it would be quite hopeless to attempt to climb up. During our descent we saw a few ptarmigans, and, while on the top, several large birds of prey, which (though I do not venture to assert it too positively) might have been eagles.

We returned by nearly the same route that we had followed in our ascent, till we reached the village of our last night's adventure ; and then continuing in this valley—which is extremely pretty, and much better cultivated than any other part of Savoy we had seen—we reached in the evening the village of Evian, and crossed the lake by moonlight to Lausanne, much gratified by our trip, and not a little pleased that we had triumphed over the threatening teeth, which might well have alarmed more hardy mountaineers than ourselves.

D. T. A.

ESSAY ON THE ORIGIN AND PROGRESS OF ANIMAL MAGNETISM.

BY THE REV. HENRY CHRISTMAS, M.A.

THE most important, as well as the most interesting light in which magic can be viewed, is its supposed connection with medical science—a connection which was not, in the beginning, to be treated with ridicule. It could not even be rejected, much less derided, until an increased knowledge of natural philosophy had taught mankind at least to conjecture where might be the bounds of their power over natural substances. When Bacon declared the probability of those wonders which seemed so impossible to his contemporaries, he was supposed to mean that in subsequent periods magic would be openly and successfully practised ; and it is not a little to the credit of his discernment that he so well calculated the probable limits of scientific acquirement. Fifty years ago, had any writer said that in the course

of half a century it would be possible to go from London to Bristol in two hours, he would have been generally disbelieved ; but if his learning and wisdom in other respects had caused any one to give credit to him in this, the difficulty would only have been solved by supposing the aid of infernal power. Now, though no one has yet witnessed so rapid a rate of travelling, we are, when told of its probable accomplishment, by no means unwilling to believe it. There is one sense in which we must always acknowledge "occult causes" and "occult properties," although we no longer call them by names so mystical. Medicines are administered every day, at whose mode of operating we cannot even guess : we have a tolerable idea of the probable result, and with this it is very likely we must for ever be content. We can hardly say what is and what is not beyond the bounds of human investigation ; but if we consider the extreme difficulty which invests many subjects—such, for example, as the effect of volition upon the nerves, and through them on the muscles, the nature of animal life, and many others which might be instanced—we shall hardly expect even an approximation to the truth.

These considerations, while they may prevent our looking with contempt on the superstitions from which even the philosophers of the middle ages were not wholly free, cannot fairly be adduced to excuse the same notions in the present day. And we are, therefore, entitled, whenever any claims of the kind are set up, to treat those who assert them either as enthusiasts or impostors. The eighteenth and nineteenth centuries have, however, produced their wonder-workers in the way of medical magic ; and the most curious instance on record, perhaps, in the history of the world, is Animal Magnetism. The effects which were certainly produced by the animal magnetisers, the number and importance of those who avowed their belief in it, and the length of time during which it flourished, make it well worthy of consideration. The virtues of the loadstone had been greatly extolled by the ancients ; it had been even declared possessed of a rational soul, and capable of great moral agencies over the human constitution. Probably on account of its attracting iron, it was supposed to be endowed with a general power of attraction ; and was hence used to heal dissensions in families, to excite love, and to promote friendship. In a case like this, and in an age like that of which we speak, any analogy, however slight, was a sufficient foundation for a belief in such qualities ; they could not be too absurd to be credited, and if a cause was asked, the "occult properties of nature" was an answer always ready and always satisfactory. Many of these notions

came down to later times. Paracelsus, in his *Archidosorum*, gives such a list of remedies as may even match those of Pliny; but when he speaks of the loadstone he becomes, if not very correct, at least not very unreasonable. Trusting to its power of attracting iron, he orders it to be reduced to a powder, and applied, in the shape of a plaster, to wounds, in order to draw out the particles of iron which might by abrasion remain in the flesh. The idea that this remedy was an effective one was so strong that, though Dr. Gilbert, of Colchester, wrote expressly against it so far back as 1600, demonstrating that by being pulverized it was deprived of its attractive force, it continued in vogue for upwards of a hundred years later, and is not, among the lower classes, altogether discontinued in the present day. Paracelsus had so high an opinion of the medical virtues lodged in the magnet, that there were but few diseases which he considered would not yield to its attractive power; and those few were soon added by Van Helmont and his other disciples. It seems singular that they did not congratulate themselves upon having, in this mineral, obtained the elixir of life. The science of magnetism had by this time begun to excite the attention of the philosophical world; and those remarkable facts which it developed, and which were already ascertained, presented a basis sufficiently broad for the erection of many fanciful and ingenious theories. The idea was soon caught that magnetism was a subtle, invisible fluid, passing through the whole universe, and which, though only as yet known through the medium of the loadstone and iron, was yet existing and operating in every other substance. Kircher entertained this opinion, and distinguishes accordingly between animal, vegetable, and mineral magnetism. As, however, the loadstone was the only substance known through which any magnetic experiments could be made, physicians were obliged to exhibit mineral magnetism alone in cases of disease, trusting to the sameness of the fluid, and the gentleness of its operation in this state.

M. le Noble, a French ecclesiastic, obtained great celebrity, in 1775, from his mode of applying the magnet in cases of nervous and spasmodic affections, particularly in tic douloureux. His plan was, to cause powerful but light magnets to be worn in the dress, near the parts disordered; as, for instance, in caps, for nervous headache. His success being noticed, he was induced to apply, in 1777, to the Royal Society of Medicine in Paris, and to request that a committee appointed by that body would examine the virtues of his magnetic dresses. The request was complied with. M. Andry and M. Thou-

ret were appointed as a committee, and, after a long and patient investigation, delivered a report greatly in favour of the plan pursued by M. le Noble.

While this was going on at Paris, a jesuit at Vienna had made use of magnetised steel plates, in medical cases, with considerable success. This man, whose name was Hell, appears to have been somewhat of an empiric, if not wholly so; for he attributed the success which he obtained, not so much to the magnetic fluid, as to the peculiar shape of his plates. Among those who witnessed his practice, and, in fact, assisted in it, was Anton Mesmer, a man who had taken his degree of M.D. at the University of Vienna at the age of thirty-two, and who had commenced his medical career by writing a treatise "On the Influence of the Planets on the Human Body." This, which shows the nature of Mesmer's studies, may be regarded as a first step towards those doctrines which he subsequently maintained. Mesmer employed the plates which Hell had made; and having performed some remarkable cures, he attributed them to his mode of employing the plates, and to the magnetic fluid which they contained. Hell published the results of Mesmer's experiments, but gave only as a cause the form which he had himself devised for the plates. Mesmer replied, and Hell rejoined; and as notoriety appears to have been Mesmer's aim, he was not much disappointed when the victory was evidently Hell's.

While the dispute between these two quacks continued, Mesmer was always writing and talking about his pretended discoveries. Had Mesmer been a truly philosophical enquirer, he would have been pronounced on the very verge of an important discovery, so singular are some of his assertions. "*I have observed*," says he, "*that the magnetic matter is almost the same as the electric fluid, and that it may be propagated in the same manner as this, by means of intermediate bodies.*" It has been suspected in our own day, and, indeed, more than suspected, that magnetism and electricity are, in fact, one and the same fluid seen under different circumstances.* But the character of Mesmer forbids us to suppose that his remark was more than a chance illustration; the very next words destroy the illusion:—"Steel is not the only substance adapted for the purpose; I have rendered bread, paper, wool, silk, leather, stones, glass, wood, men, dogs, in short, everything I touched, magnetic to such an extent that

* See Prof. Barlow's paper, "On the probable Electric Origin of all the Phenomena of Terrestrial Magnetism," *Phil. Trans.*, 1831.

these substances produced the same effects as the loadstone on the diseased. I have charged jars with magnetic matter in the same way as is done with electricity." This is an extract from a letter addressed to a friend at Vienna (M. Unzer), and such were the statements which he made in various communications to the learned societies of Europe, praying them to examine his pretensions, as the Royal Society of Medicine in Paris had done those of M. le Noble. All these, save the Academy of Sciences at Berlin, treated the application with silent contempt; and that, by way of answer, refuted his theory. It may be remarked that the chief case upon which Mesmer relied was that of a Madlle. Cesterline, who had been for some years living in his house. This young lady, who was, he tells us, suffering under a horrible complication of disorders, recovered by his magnetic treatment; and the whole tenor of the account is such as to imply that she was cured by a very skilful application of the magnetic fluid. But so absurd were his ideas of the magnet, and the mode of conducting the fluid, that his whole theory was shown to be unworthy of reception by the Academy. Finding that so inconsistent a scheme would not at all answer his purpose—finding, in fact, that the scientific men of that day were too addicted to close investigation to allow any falsehood to be propagated under the mask of science—Dr. Mesmer adroitly altered his plan, declared that the Berlin Academy had altogether misunderstood him, and having thus rescued himself from the grasp of philosophical enquiry, he took refuge in a profundity which would not have disgraced Paracelsus himself. He now came forward with a new theory—not avowedly so, but yet greatly differing from that which he had hitherto maintained. The magnet was the instrument in his hands, he said, of conducting not only the magnetic fluid commonly so called, but another subtle influence, which he called Animal Magnetism, and which he uniformly refused to explain. He considered this influence, if not centred, at least highly concentrated, in his own person; and he republished his observations on the case of Madlle. Cesterline, in a form accommodated to this new theory. While thus employed at Vienna, he was not idle in experimentalizing; but failing in his attempts to cure some eminent persons, and having involved himself in a dispute with many of the faculty at that city; and being, moreover, rather discouraged by the court, and looked upon with great disdain by the learned, he left Austria, and, after travelling in many parts of Germany and Switzerland, finally settled at Paris.

Sprongel* says that having undertaken to cure a girl named Paradis (a pensioner of the empress) of blindness, he, on declaring that he had succeeded, was found, on examination, to have been guilty of such gross imposture as to receive an imperial order to leave Vienna in twenty-four hours. At all events, it is certain that, in the beginning of 1778, he left Austria, and went to Paris. Here he at once entered upon practise, and wrote, in 1779 his "*Memoire sur la decouverte du Magnetisme Animal*," in which he expresses himself as follows :—"The magnetic fluid is a fluid universally diffused ; it is the medium of a mutual influence between the heavenly bodies ; it is so continuous as to have no end ; its subtlety admits of no comparison ; it is capable of receiving, propagating, communicating, all the impressions of motion ; it is susceptible of flux and reflux. The animal body experiences the effects of this agent ; and it is by insinuating itself into the substance of the nerves that it affects them immediately. There are," he observed, "particularly in the human body, properties analogous to those of the magnet ; and in it are discerned poles equally different and opposite. The action and the virtues of Animal Magnetism may be communicated from one body to other bodies, animate and inanimate. This action takes place at a remote distance, without the aid of any intermediate body : it is increased, reflected by mirrors ; communicated, propagated, augmented by sound ; its virtues may be accumulated, concentrated, transported. Although this fluid is universal, all animated bodies are not equally susceptible of it ; there are even some, though a very small number, which have properties so opposite, that their very presence destroys all the effects of this fluid on other bodies. Animal Magnetism is capable of healing diseases of the nerves immediately, and all other diseases mediately ; it perfects the action of medicines ; it excites and directs salutary crises in such a manner that the physician may render himself master of them. By its means, he knows the state of health of each individual, and judges with certainty of the origin, the nature, and the progress of the most complicated diseases ; he prevents their increase, and succeeds in healing them without at any time exposing his patient to dangerous effects or troublesome consequences, whatever be the age, the temperament, and the sex.†" And in the preface to the same work he unhesitating declares, "In Ani-

* *Sondschriben uber Thier. Mag.*, p. 104.

† *Memoire*, p. 74.

mal Magnetism, nature presents an unusual method of healing and preserving mankind."

As a commentary on these assertions, we may notice the interview which took place between Mesmer and Dr. Ingenhousz. The doctor had, it appears from Mesmer's account, spoken slightly of the magnetic theory, and even went so far as to recommend him not to publish his experiments; the reply was, "come and see them yourself;" and a relapse of Madlle. Esterline, who was resident in Mesmer's house at the time, afforded an admirable opportunity for the display of his magnetic process. Dr. Ingenhousz came. "The patient," says Mesmer, "was then in a faint accompanied with convulsions. I informed him that this was a favourable occasion for him to convince himself of the existence of the principle which I had announced to him, and of the property which he himself possessed of communicating it; I made him go near the patient, from whom I retired, desiring him to touch her. He did so; she did not move; I called him back, and, taking him by the hand, communicated to him the animal magnetism. I then made him go again near the patient, keeping myself always at a distance, and desired him to touch her a second time, the result of which was, her being thrown into convulsive motions. I made him repeat this touch several times, which he did with the point of his finger, varying his direction each time, and, to his great astonishment, he produced always a convulsive effect in that part which he touched. At the termination of these operations, he told me that he was convinced. I proposed to him a second trial; we retired from the patient, so as not to be perceived by her even if she should recover her consciousness. I presented to Dr. Ingenhousz six porcelain cups, and begged him to point out the one to which he wished me to communicate the magnetic virtue. I touched that which he chose, and made him apply successively the six cups to the hand of the patient. When he came to that which I had touched, her hand moved, and she appeared to feel pain. Dr. Ingenhousz having repeated the experiment with the six cups, the same effects were produced, I then put back the cups into the place from which they had been taken, and after a short time, taking hold of one of his hands, I desired him to touch with the other any of the cups which he pleased: he did this, and the cups being brought into contact with the patient, the same effects were produced as before. The communicability of the principle being thus established to the satisfaction of Ingenhousz, I proposed to him a third experiment, in order to make him acquainted with its action at a distance, and its

penetrating virtue. I directed my finger towards the patient, at the distance of about eight paces ; and immediately the body became convulsed, so as to raise it upon her bed with the appearances of pain. I continued, in the same manner, to direct my finger towards the patient, placing, at the same time, Ingenhousz between her and me. She experienced the same sensation. These trials being repeated at the pleasure of Ingenhousz, I asked him if he was satisfied with them, and convinced of the wonderful properties which I had announced to him, offering, if he were not, to repeat our trials. His answer was that he had nothing more to desire, and that he was convinced ; but he exhorted me, by the regard which he had for me, not to communicate anything relative to this matter to the public, in order not to expose myself to its incredulity." Subsequently we find Dr. Ingenhousz, both in writing and by word, declaring that the whole affair was a preconcerted trick between Mesmer and his patient ; and his words to the latter, even by his own report, are very ambiguous and unsatisfactory.

In all this, we find no attempt made to attribute the effects produced to the magnet ; the experiments were made by Mesmer with his finger, and by Ingenhousz by cups which Mesmer had touched : and this was the plan which was pursued at Paris. Here, as at Vienna, apartments were arranged for the reception of patients, and a peculiar apparatus established. This apparatus, though not considered necessary, as we see by Madlle. Cœsterline's case, was yet deemed very important. It was called the "baquet," (bucket), and consisted of a large circular vessel of oak, about eighteen inches high, and covered with a top pierced full of holes. It was filled with powdered glass, iron filings, sawdust, and bottles of water, which had been previously subjected to Mesmer's operation by the finger. Through the holes were thrust iron rods, a long one and a short one alternately, bent outwards at top, as conductors of the fluid. Round this baquet, the patients were placed in rows, one behind another ; and the rods being accommodated to their position, they placed them in contact with those parts of the body in which was seated their disease. In a corner of the room was a piano-forte, on which slow and solemn airs were played ; for sound, as we have seen above, was a means of conducting animal magnetism. Meantime it was more actively elicited by the rod and the finger of the operator, who placed his hand or his rod on the seat of disease. The practise of Mesmer at Paris could not fail of exciting attention ; and as many remarkable effects were really produced, the absurd theories of the supposed in-

ventor did not nullify the claim which these effects presented to scientific investigation. Among the earliest as well as the most important converts to this new agency was M. d'Eslon, doctor regent of the Faculty of Medicine at Paris, and physician to M. le Comte d'Artois. He, without adopting any theory, recognized the effects produced by Mesmer's mode of operating, and operated himself in the same way. His conduct caused him to suffer much opposition from the faculty; and at last, to justify himself, he published a list of his own observations. This, as might have been expected, did but add fuel to the fire; and when, a short time afterwards, he laid before the Royal Academy of Medicine four proposals for investigating the pretensions of Mesmer, that body replied by requiring him to be more cautious, by suspending him from exercising his vote in their assembly for a year, and if, at the expiration of that time, he persisted in his new creed, they threatened to erase his name from their lists. As to the propositions, they unanimously rejected them; but by this time it was become a matter of indifference to Mesmer what the faculty thought of him or his proceedings. He had many patients, and more were continually flocking both to him and to d'Eslon; indeed, scientific investigation was by no means to his taste, and he expressly stipulated that any inquiries should be, not as to how his cures were performed, but whether they were performed or not. So great was his popularity, and so implicit the confidence which his patients placed in him, that he had but to announce his intention of quitting France, and the very throne was besieged with petitions that some inducement should be held out by government to retain him in France. His own demand, when applied to, was singularly modest. He merely required a large estate which he named, and a splendid income by way of fixed salary; to have no public duties, but to be at free leisure to use his powers as he pleased, and he, in return for these trifles, would make France his residence. It would hardly be believed, were it not a matter of history, that Louis XVI. actually offered Mesmer 30,000*l.* per annum, on condition of taking three pupils, to be named by the government. This offer, however, was refused. Mesmer calculated that his practice was worth much more, and that the salary offered would not compensate him for the necessity of revealing his secret to three persons named by the government. He resolved now to quit France, and retired accordingly to Spain, where he practised as he had done in Paris.

In the meantime, the year appointed by the Royal Society of Medicine to M. d'Eslon, to review his opinions in, had elapsed: and he

was summoned by that body, either to retract his belief in animal magnetism, or to submit to expulsion ; but d'Eslon was too convinced of the efficacy of this new agent, and probably found it too profitable, as well as too successful, to resign. Instead of appearing before the Academy, he avowed himself a practitioner of animal magnetism ; and was accordingly, with several other members of the same body, who had been convinced by his experiments, formally expelled. On hearing of this, Mesmer exclaimed against d'Eslon, as he had formerly done against Father Hell ; and complained that attempts were made to rob him of the reward of his discoveries. His popularity in Paris had not declined in consequence of his temporary absence ; and his complaints were so well listened to, that a very large sum was raised, by way of subscription, to secure the continuance of magnetism, and to reward its discoverer. Mesmer now returned to Paris, and continued his practise and his lectures. Berthollet, among others, attended them, and has left on record his opinion (which he communicated to Mesmer at the time) that the mysterious influence so much vaunted of did not exist, and that all the effects of magnetism were produced by the excited imagination of the parties, and by the heat, friction, &c., employed in the process. However, M. Berthollet's opinion, valuable as it might be in the estimation of scientific men, was not of much avail in a case where the stream of popular favour ran so strong. It was determined that, without regard to the expense, all the elements, principles, and applications of this new science, should be carefully engraved ; and that, in order to preserve to them a suitable and merited dignity, only one copy should be delivered to those who should be collectively authorized to establish a magnetic institution and courses of instruction in some towns that were fixed upon. The physicians of Lyons acquired one of these copies, secured against an indiscreet publicity by the precaution of having the essential and technical words expressed by figures or signs, of which we are furnished with the key. Hence the mystery that has always surrounded that science and its practice, which undoubtedly might have been very useful in the exercise of ordinary medicine. "As survivor, I possess this engraved work in all its integrity." These words were addressed by M. Picher Grand-champs, of Lyons (one of the disciples of Mesmer), to M. Bourdois de la Motte, who was, in 1825, the president of a commission appointed to examine and report upon Animal Magnetism. This is mysterious enough ; but Mad. Campan gives, in her journal, an anecdote still more strong. M. Campan, who was a decided believer in

magnetism, was by his own desire removed to the house of Mesmer, when suffering from pleurisy. While there, Mad. C., of course, visited him frequently, and begged to know what treatment M. Mesmer thought of employing. "I purpose," he replied, "to introduce into the bed of the patient, by his left side, one of three things—a young woman of a dark complexion, a black hen, or an empty bottle." "Sir," said Mad. Campan, "if it is all the same to you, I should prefer your trying the empty bottle." Here was a choice of remedies which, since the dark ages, can hardly be paralleled. This was indeed calling into exercise "the occult properties of things."

Some other similar circumstances had already begun to exert an influence on the public mind, when the theory was subjected to a more searching investigation than any which it had yet experienced—an enquiry which, in the eyes of the philosophical world, finally settled the question of Animal Magnetism. A commission was formed by royal authority, of which the following celebrated men were members: the president, Bailly the astronomer, Lavoisier, and Benjamin Franklin. The others were Salir, D'Arcet, Guillotin, and Majault, members of the Faculty of Medicine at Paris; and le Roi, de Bory, and the three above-named members of the Royal Academy of Sciences. The report was drawn up by Bailly; and, after describing the "baquet," he thus goes on to notice its effects:—"The sick persons, arranged in great numbers, and on several rows round the baquet, thus receive the magnetism by all these means—by the iron rods, which convey to them that of the baquet; by the cords wound around their bodies, and by the connection of their thumbs, which communicate to them that of their neighbours; by the sound of the piano-forte, or of an agreeable voice, diffusing the magnetism in the air. The patients were also directly magnetised by means of the finger and rod of the magnetiser, moved before their faces, above or behind their heads, and on the diseased parts, always observing the distinction of poles. The magnetiser acts on them by fixing his eyes on them; but above all they are magnetised by the application of his hands, and by the pressure of his fingers on the hypochondres, and on the regions of the abdomen—an application often continued for a long time, sometimes for several hours. Meantime the patients, in their different conditions, present a very varied picture. Some are calm, tranquil, and experience no effect; others cough, spit, feel slight pains, local or general, heat, and have sweatings; others, again, are agitated and tormented with convulsions. These convulsions are remarkable with regard to the number affected with them, to their du-

ration and force. As soon as one begins to be convulsed, several others are affected. The commissioners have observed some of these convulsions last more than three hours ; they are accompanied by the expectorations of a muddy viscous water, brought away by the violent efforts. Sometimes streaks of blood have been observed in this fluid ; and among others there is a sick young man who often brings up large quantities of blood. These convulsions are characterized by the precipitous involuntary motion of all the limbs, and of the whole body ; by the constriction of the throat ; by the leaping motion of the hypochondres and the epigastrium ; by the dimness and wandering of the eyes ; by piercing shrieks, tears, sobbing, and immoderate laughter ; they are preceded or followed by a state of languor and reverie, a kind of depression, and even drowsiness. The smallest unforeseen noise occasions shudderings ; and it was remarked that the change of tone and measure in the airs played on the piano-forte had an influence on the patients ; so that a quicker motion agitated them more, and renewed the vivacity of their convulsions. Nothing is more astonishing than the spectacle of these convulsions : one who has not seen them can form no idea of them. The spectator is equally astonished at the profound repose of one part of the patients, and the agitation which animates the rest ; at the various accidents which are repeated, and the sympathies which are established. Some patients you will observe devoting their exclusive attention to each other, rushing towards one another, smiling, speaking with affection, and mutually soothing their crises (convulsions). All are under the power of the magnetiser ; it matters not in what state of drowsiness they be, his voice, a look, a gesture, brings them out of it. Among the patients in convulsions were always observed a great many women, and few men ; the first convulsions were always one or two hours in being formed, and as soon as one was formed, all the rest began successively in a short time. It is impossible not to recognize in these constant efforts a great power which agitates the patients, and of which the magnetiser appears to be the depository."

Such were the effects of Animal Magnetism, as observed by such men as Bailly, Lavoisier, and Franklin. But it was not merely the effect of this powerful agent, whatever it might be, thus formally elicited, that the commissioners wished to observe ; they examined individual cases, and noticed the consequences of private magnetising. Two cases we shall mention, as examples ; for all were of the same nature, and attended with nearly the same results. It was asserted by the magnetists that a tree might be made the de-

positary of the magnetic influence, and affect accordingly all who came under it, or even near it. A tree, says Mesmer, was magnetised by "first touching it, and then retiring a few steps from it; all the while directing the fluid upon it, from the branches towards the trunk, and from the trunk towards the root." On some occasions, circular seats were placed round the tree, and cords suspended from it so as to supply the place of the "baquet." When the patients had seated themselves, they wrapped the cords round the diseased parts of their bodies, and formed a chain of communication by their thumbs. The magnetiser was furnished with a rod, and proceeded in the same way which Mesmer adopted in his public apartments. A tree was magnetised in Dr. Franklin's garden at Passy, and one of M. d'Eslon's patients subjected to its influence. Mesmer would allow no investigation to be made of his proceedings; but M. d'Eslon, being willing to facilitate the enquiries of the commissioners, all their remarks apply to his practise, which, as performed by precisely the same means, and attended with the same results, cannot, without great inconsistency, be considered as a different system.

A youth of twelve years of age was brought into the garden (he was aware for what purpose), and led first to one tree, then to another. He had, it should be remarked, no knowledge of which tree had been magnetised; and his eyes were bandaged, that he should not see the operations of M. d'Eslon, who continued to magnetise a particular tree. Under this arrangement, all the symptoms indicated by animal magnetism were brought on, and finally a crisis was produced at a distance of twenty-seven feet from the tree that had been magnetised. This case was (the commissioners remarked), even by itself, decisive. Had the boy been insensible to the effects of magnetism under the tree on which M. d'Eslon had operated, it might have been attributed to his insensibility to the fluid; as it was, the effects were produced without the agency of M. d'Eslon at all. Again, two women, chosen by M. d'E. himself, were brought to Dr. Franklin's house, and, after having their eyes bandaged, were induced to believe that M. d'Eslon was magnetising them; the crisis came on accordingly, though nothing was done. But, in order to make the case still clearer than even these instances had done, one of M. d'E.'s patients was actually operated upon by him, in the presence of some of the commissioners, without her being aware of it, and no effects were produced. The report of the commissioners, therefore, declared, very much in the words which Berthollet had before employed, that after five months examination, and after carefully seeking (but in vain) for proofs of the existence of a magnetic

fluid, such as that asserted by Mesmer and d'Ealon—after submitting themselves to its action, in varied ways, without experiencing any effect—and after having further ascertained that all the effects produced by it could be elicited where it was not even pretended to be employed—that magnetism could produce no effects without the aid of an excited imagination, and that the imagination, when excited, could effect all that was attributed to magnetism. They did not hesitate to ascribe all the wonders they had witnessed to the power of the imagination, the tendency of imitation natural to all mankind, and the animal heat and friction employed by the magnetists; and, further, they considered Animal Magnetism hurtful and dangerous to society, particularly in a moral point of view.* This

* A "Memoire Secrete" was presented to the king at the same time with the report which we have just noticed, and it contains some remarkable particulars: "Les commissaires ont reconnu que les principales causes des effets attribués au Magnétisme Animal, sont l'attouchement, l'imagination, l'imitation, et ils ont observé qu'il y avoit languors beaucoup plus de femmes que d'hommes encore cette difference, a pour premiere cause la differente organisation des deux sexes. Les femmes ont en general des nerfs plus mobiles, leur imagination est plus vive et plus exalté. Il est facile de la frapper de la mettre en mouvement. Cette grande mobilité ex leur donnant des sens plus delicats et plus e quis les rend plus susceptibles des impressions de l'attouchement. En les touchant dans une partie quelconque on pourrait dire qu'on les touche à la fois partout. Cette grande mobilité des nerfs fait qu'elles sont plus disposées à l'imitation. Les femmes comme on l'a déjà fait remarquer sont semblables à des cordes sonores parfaitement tendues et à l'unisson. Il suffit d'en mettre une en mouvement toutes les autres à l'instant le parlagent. C'est que les commissaires ont observé plusieurs fois des qu'une femme tombe en crise les autres ne tardent pas d'y tomber. Cette organisation fait comprendre pourquoi les femmes ont des crises plus frequentes, plus longues, plus violentes que les hommes, et c'est à leur sensibilité des nerfs qu' est du le plus grand nombre de leurs crises. Il en est quelques unes qui appartiennent à une cause cachée mais naturelle à une cause certaine des emotions dont toutes les femmes sont plus ou moins susceptibles et qui par une influence éloigné en accumulant ces emotions, en les portant au pus haut degree peut contribuer à produire un etat convulsif qu'on confond avec des autres crises. Cette cause est l'empire que la nature a donné à un sexe sur l'autre pour l'attacher et l'emouvoir, la plupart des femmes qui vont au Magnetisme ne sont pas réellement malades beaucoup y viennent par oisivete et par amusement d'autres qui ont quelques incommodités n'en conservant pas moins leur fraîcheur et leur force, leur sens sont tous entiers, leur jeunesse a toute sa sensibilité. Elles ont assez de charmes pour agir sur le medecin elles ont assez de santé pour que le medecin agisse sur elles, la proximité long temps continuée, l'attouchement indispensable la chaleur individuelle communiquée les regards confondus sont des voies connues de la nature et les moyens qu'elle a preparés de tout temps pour operer

report was quite sufficient for the scientific world ; but such were not those on whom Mesmer depended both for profit and popularity. He complained greatly of the investigation which was going on, said that the secret was in his hands alone, and at last took certain pupils, from whom he received nearly £.14,000, and to whom he communicated his doctrines. They formed societies to propagate them, and thereby brought upon themselves the indignation of Mesmer, for making public what he called his secret, and which, in spite of the large sums he had received, he still professed to consider his own property. He, however, now quitted France, and retired to Frauenfeldt, by the lake of Constance, where he resided till 1814, when he removed to Mersburg (his native place), and died the next year, aged eighty one.

But while Animal Magnetism received so severe a blow at Paris by the decision of the commissioners, it made its appearance in another form, and with different effects, in the provinces. One of Mesmer's pupils (the Marquis de Puységur) retired to his estate at Busaney, near Soissons, and there, with his brother, practised gratuitously. The result of their proceedings was a new feature in the effects of magnetism, to which they gave the name of magnetic

immanquablement les communications des sensations et des affections. L'homme qui magnetise a ordinairement les genoux de la femme renfermes dans les siens : les genoux et toutes les parties inferieures du corps sont par consequent en contact. La main est appliquée sur les hypochondres et quelques fois plus bas, sur les ovaires, le tact est donc exercé à la fois sur une infinité desporties. L'imagination qui agit en meme temps repand un certain desordre dans toute la machine elle suspend le jugement, elle écarte l'attention. Quand cette espace de crise se prepare le visage s'inflamme par degres, l'œil devient. On voit la femme baisser la tete, porter la main au front et aux yeux pour les couvrir cependant la crise continue et l'œil se trouble les paupières devienennt humides, la respiration est courte et entrocoupée la poitrine s'élève et s'abaisse rapidement, les convulsions s'etablissent ainsi que les mouvements precipités et brusques ou des membres ou du corps entier la preuve que cet etat de convulsion n'a rien de penible c'est que dès qu'il a cessé il n'en reste aucune trace facheuse. Le souvenir n'en est pas desagreable, les femmes s'en trouvent mieux et n'ont point de repugnance à le sentir de nouveau. Comme les emotions éprouvées sont les germes des affections et des penchans, on sent pourquoi celui qui magnetise inspire tant d'attachement. En se proposant de guerir des maladies qui demandent un long traitement on excite des emotions agreables et chères des emotions que l'on regrette et que l'on cherche a retrouver."—Rapp. Sec. redigé par Bailly. This report met with the attention which it merited, and regulations tending to obviate the dangers which the unrestrained practise of animal magnetism seemed calculated to produce, were adopted in all countries where the mode of treatment itself met with the sanction of government.

sleep. After speaking of some cures which he had performed in the way prescribed by Mesmer, and with the usual attendant circumstances, he says, "These slight successes induced me to attempt being useful to a peasant, a man of twenty-three years of age, who had been four days confined to his bed with a catarrh. I went, then, to see him; it was last Tuesday, at eight in the evening. The fever had just become milder. After raising him, I magnetised him. What was my surprise on seeing this man, at the end of two or three minutes, fall asleep in my arms, without convulsions or pains! I continued the crisis, which occasioned giddiness. He talked, spoke aloud of his affairs. All this was in sleep. When I thought his ideas were affecting him disagreeably, I checked them; I endeavoured to inspire him with more agreeable ones."—"I brought him (still in sleep) to the magnetized tree; his head then sunk down, and he fell into a state of perfect somnambulism. At the end of an hour I took him home to his house again, where I restored him to his senses. Several men and women came to tell him what he had been doing. He maintained that it was not true; that, weak as he was, and scarcely able to walk, it would have been impossible for him to go down stairs and walk to the tree." This new symptom, which soon became universal, was declared to be the proper effect of magnetism; and that spasms and convulsions were only produced in consequence of unskilfulness in the mode of applying it. M. de Puységur seems to have been chiefly guided by the directions of the peasant whom he had cured; for though not remarkable for intellect when awake, he was, when thrown into a crisis of magnetic sleep, perfectly marvellous. "According to him, it is not necessary for me to touch every one—a look, a gesture, a wish is sufficient. And it is one of the most limited peasants of the country that teaches me this. When he is in a crisis I know nothing more profound, more prudent, more clear-sighted than he."

These wonders were not of a nature to stop here; this shutting out of external impressions only gave a more vivid perception of those from within, and accordingly patients, when in this state, not only walked, talked, preached, advised, and prophesied, but were even able to transfer the action and power of the senses to parts not ordinarily capable of exercising them. The stomach, and even the fingers, were endowed with sight, smell, and hearing; the mind was enriched with the knowledge of ancient and foreign languages; and so great was the accession of knowledge which, with the crisis, would "come like phantoms, so depart," that any magnetic patient might, during his paroxysms, perform the duties of a

"professor of things in general," and discourse learnedly "de omnibus rebus et quibus dans aliis." An event, however, was now approaching, so awful in its nature and so extensive in its consequences, as to deprive of interest all contemporary questions, and, indeed, during its terrific progress, to have put almost a complete stop to the development of anything but the more stormy passions of human nature. Animal Magnetism lost its importance, and seemed totally forgotten, when the French Revolution broke out; and it was not till after the restoration of tranquility that mankind were at leisure to re-direct their minds towards its pretensions. Then it was that, as if by way of compensation for the time that it had lost, it flourished in the country of the inventor so much that public lectures were delivered on it at the universities, and journals devoted to its details conducted by men of distinguished attainment. There were now three sects of animal magnetists—some who adopted the theories of Mesmer, and were called Mesmerists; others who, practising without theory, merely recorded their results: those at the head of whose school had been the two M.M. de Puysegur: and, lastly, another class, who still more simplified the process, having neither magnetized trees, baquet, nor rods, but who merely offered up prayers by the bedsides of their patients. These were called spiritualists, or, from the name of their founder, Barbarinists. But, whatever difference there might be in the mode by which the fluid was supposed to be conveyed, or the theory which was adopted in reference to it, all agreed in the wonderful nature and curative effects of "magnetic sleep." "In Mesmerism," says Oker, "animal instinct arises to the highest degree admissible in this world. The *clair-voyant* is thus a pure animal, without any admixture of matter; his operations are those of a spirit; he is similar to God; his eye penetrates all the secrets of nature. When his attention is fixed on any of the objects of this world—on his disease, his death, his well-beloved, his friends, his relations, his enemies—in spirit he sees them acting; he penetrates into their causes, and the consequences of their action; he becomes a physician, a prophet, a divine. Such a state of spirituality and pure animality is that of the saints."

Now all this is but the revival of a very old psychological theory. It must be acknowledged, however, that it was much better and more philosophically maintained of old than by the magnetists. The great authority upon the subject in France at present, is the *History of Animal Magnetism*, by M. Deleuze (for it is not yet extinct); and with his account of the effects produced by magnetic

action we shall conclude. "When magnetism produces somnambulism, the being who is in this condition acquires a prodigious extension in the faculties of sensation ; several of his external organs—generally those of sight and hearing—are inactive, and all the sensations which depend upon them take place internally. Of this state, there is an infinite number of shades and varieties ; but, in order to form a right judgment of it, we must examine it in its greatest difference from the state of waking, passing over in silence all that has not been confirmed by experience. The somnambulist has his eyes shut ; he does not see with his eyes, he does not hear with his ears, but he sees and hears better than one who is awake. He sees and hears only those with whom he is in magnetic communication. He sees nothing but that at which he intends to look ; and he generally looks only at those objects to which his attention is directed by those in magnetic communication with him. He is under the will of his magnetiser in regard to everything that cannot hurt him, and that he does not feel contrary to his ideas of justice and truth. He feels the will of his magnetiser ; he perceives the magnetic fluid ; he sees, or rather he feels, the interior of his body and that of others (provided that he touch them) ; but he commonly observes only those parts of it which are not in their natural state, and disturb the harmony of the whole. He recovers the recollection of things which, when awake, he had forgotten. He has prophetic visions and sensations which may be erroneous in some circumstances, and which are limited in their extent. He expresses himself with astonishing facility. He is not free from vanity. He becomes more perfect of his own accord for a certain time, if guided wisely ; he wanders when he is ill-directed. When he returns to the natural state, he entirely loses the recollection of all the sensations and all the ideas which he had had in the state of somnambulism ; so that these two conditions are as foreign to one another as if the somnambulist and the waking man were two different beings."* After this, however, we are told that the last is the only invariable symptom, and that the rest are rarely united in one person. Deleuze is a respectable writer, and evidently wishes to account for these wonders without bidding farewell to philosophy ; and he, therefore, has a theory that seeing, hearing, &c., in magnetic patients, are carried on by means of an internal circulation of the fluid, which transmits the impressions immediately, and without the intervention of the nerves, to the brain. This has given

* Deleuze, "Hist. Crit. du Mag. An.," vol. i., p. 185.

rise to a new species of quackery—that of magnetizing, not the patient, but the physician, who forthwith sees all that is wrong in the patient's frame—a kind of quackery that has one advantage above all others, that it does not require even a pretension of learning or skill in the practitioner; he or she becomes imbued with all knowledge when brought to a state of somnambulism, however ignorant before.

In the year 1827,† two women, named Burckhart and Couturiere, (the latter a lace-maker) were tried at Paris for prescribing for and advising a young man named Gustave Pigault, and so terrifying him by representations of the diseased state of his viscera that he committed suicide. It appeared in evidence that the diseased was a very weak-minded young man, and given to lowness of spirits on account of supposed ill health; for which, in spite of the repeated representations of his mother, he had been in the habit, for three years, of applying to the prisoners. The medicines which they gave him (for it did not appear that he was himself magnetized) were of a very powerful description. One day he said to his mother, that woman (Couturiere) has deceived me; she has given me a medicine fit for a horse—composed of aloes, saffron, mercury, and jalap. I have a fire in my bowels. At length a definite offer was made that, on condition of paying 600*fr.*, he should be cured in two months. Couturiere came to the house, was magnetized, and fell asleep. “Heavens! what do I see?” was her exclamation; “your body is filled with spots of blood. I am not satisfied with you; you will never get better.” The result of her exclamation has been seen. The person who magnetised her was a music master named Geslin, and he, when asked if he ever had recourse to magnetic sleep himself, replied “I am very wakeful, nobody was ever able to send me to sleep.”

We have now (saving the *unfacciamento* of Animal Magnetism, which has been “got up,” within the last two years, by Dr. Elliotson and others, and which, as developing no new principles, we have purposely omitted) briefly reviewed the history of Animal Magnetism; and when we consider that the imagination has been the most powerful agent that superstition has ever employed—both on account of the wonders which have been by it performed, and because, inasmuch as there is no necessity for imposture in the believers, the venerable and the virtuous may be, and have been, thereby sometimes enlisted on the same side as the mean and dis-

† *Thrmcs*, April, 1828, p. 60.

honest—an account of the only instance in which its powers have been subjected to the searching ordeal of scientific investigation cannot be unimportant. Enough was elicited by the commissions at Paris to settle many disputed questions, to assign to the right cause many wonderful cures of past times, and to reconcile many historical passages with the principles of truth.

(To be continued).

THE MUSICIAN ABOUT TOWN.

THE principal feature of attraction at the Norwich Festival this year (which occurred while our last number was going to press), was the performance of Spohr's second oratorio, "*Des Heilands letzte stunden*" (the last words of the Saviour), and the presence of the composer himself, who conducted his own work, and performed at the evening concerts. After having for years enjoyed the reputation of being one of the most (if not *the* most) intellectual violinist, and composer for the instrument, of his day, Spohr now enjoys the distinguished honour of being esteemed a first-rate dramatic composer, and an oratorio writer in the same rank with Beethoven. He has displayed his genius in a large number of concertos and other compositions for the violin; and his knowledge of the powers and combined effects of an orchestra is not exceeded by any living musician. His opera of "*Azor and Zemira*" is the only one of his dramatic works that has been brought forward on the English stage; and although this was effected with no ordinary zeal and care, attended by gorgeous scenery, it did not receive that patronage from the public due to its merits; while the theatre itself was not benefited by the experiment. A total revolution must take place in the whole European taste for vocal music, which, even to the recesses of Germany, is fast welcoming the modern Italian school, before the opera music of Spohr becomes what may be called the stock property of the theatres. Even in his own country, his vocal airs are thought to be too chromatic and instrumental in character; and it must be acknowledged that multitudes of passages might be quoted from his works which are essentially instrumental in feature and construction. Great he is, nevertheless, in dramatic

conception ; and yet he is, in his "heart of heart," an instrumentalist. His great symphony is, perhaps, the foremost mark and promontory of his genius. His overtures to his first oratorio (*"Die Letzen Dinge,"* the *"Faust,"* the *"Berggeist,"* and the *"Jessonda,"* are all fine in conception and great in achievement. In this walk of his art he appears to be wholly unrestrained ; but in his oratorios, although there are isolated movements which in themselves are sufficient to disarm criticism, yet we cannot but feel that, in their general style and treatment, Spohr does not maintain the rank among oratorio writers that he does with the dramatic and instrumental composers. We prefer the principal airs, and even the best choruses, to be found in his several operas, to those of the same standing in his sacred works. In the former, both classes of movements are more free, natural, and energetic. The prevailing characteristic of this composer's mind appears to us to be serenity of expression, plaintive sorrow, and sweetness, amounting to languor : even his most spirited movements are not untainted with this depression, when compared with the same class of writing by the other great musicians. Energy, and even vehemence, he has, doubtless, manifested upon occasions, as may be instanced in the chorus and succeeding symphony in his first oratorio, describing the last convulsion and ruin of all things ; and in the storm scene in his second, of both which it should seem that Beethoven was his model. But in his gayest productions we never entertain the feeling that Spohr is of a joyous, still less an exuberant nature ; and even the very character and combinations in his accompaniments do not tend to vivify, but to sadden his melodies. They are severely scientific, and rich even to surfeiting ; but they appear to be the effusions of a deeply contemplative, and not of a buoyant spirit. We cannot immediately recal a single movement in all his works that would convey the idea of Spohr's ever having been betrayed into a rousing laugh.

Spohr is not only one of the most distinguished mannerists of his age, but, what must have struck all who are in any degree familiar with his compositions, particularly his later ones, and what must immediately present itself upon hearing his last oratorio which was performed at Norwich, is, that it contains much which he has before written, and little that is either original or eminent, as referable to his own genius. No fresh sensation or vivid emotion is excited in the mind of the auditor : it is a twice-told tale. This does not indicate the loftiest order of genius ; but Spohr has long been amenable to the charge of repeating himself : and although we honestly ac-

knowledge that the peculiar distinctness of his style and the turn of his phrases, with the marked character of his harmonies, all tend to keep him distinct from other composers, still it must eventually, and at no distant period, deteriorate his reputation, this frequent recurrence to his previous successes, repeating not merely the execution and details of movements, but even, in some instances, phrases of melody. All these objections, with others to be presently super-added, were the causes that the oratorio encountered no very enthusiastic reception when it was first performed in this country, at the Hanover-square Rooms, in 1837; and this was the prevailing opinion among those of the profession who were present upon that occasion. For the production of so eminent a man, it was considered with indifference; and this circumstance may account for the English version of the work being changed. It was then entitled "The Crucifixion;" whereas, when it was reproduced at the Norwich Festival, it was called "Calvary."

It is not correct, as was stated in one of the articles in the morning papers, preparatory to the performance at Norwich, that from the time of his first oratorio being performed in this country, the reputation of the author has been "*steadily increasing*." For a few years after that event, and at the time of the production of the "Azor and Zemira," some interest was excited in favour of the Spohr school of music, and a few imitators were found among our native composers: but at no time could the progenitor of it have been denominated a popular composer, nor do we believe (for the reasons heretofore alleged) that he ever will be so. He will continue to be the idol of the instrumentalist and the amateur quartett player; but so long as the taste exists in favour of the simple and severe style in oratorio writing, the oratorios of Spohr will be resorted to at intervals only for public performance.

Another obstacle to the general popularity of the work is, that it is dramatic, and more than dramatic—it is *theatrical*; and, like many theatrical adaptations of a point in history, the author of the words has taken the most insolent liberties with the sacred text. We affect no Puritanism in these matters (although, from a principle of taste, we abhor the impertinence of paraphrases of Holy Writ), but the greatest latitudinarian must feel offended at an imaginary person named Philo being introduced to preside at the trial of the Saviour, instead of Pilate, who is not even named; and there can be but one opinion respecting the propriety of a long maudlin scena being put into the mouth of the mother while her son is hanging upon the

cross. By selecting this subject for musical treatment, Spohr has brought himself into direct competition with the most complete of Handel's oratorios ; and if Handel ever exceeded himself in power and pathos, it was in the "Messiah" (the choruses of "Israel in Egypt" alone excepted, which constitute the sublime of his power). He has also brought himself into a comparison with Haydn, in whose "Passione," or "Seven last words of the Saviour on the cross," the suffering and resignation at that dreadful period are developed with an intensity and grandeur achieved in no other of the compositions of that great master. Moreover, he enters the lists with Beethoven, who, in a similar dramatic treatment of the subject, brings before us the scene in the garden of Gethsemane by night, and this so vividly as to pre-occupy us, and induce us to look "with lack-lustre eye" upon any subsequent representation of the event. Lastly, by the way in which the story has been arranged, Spohr has been brought into competition with himself, the sublimer parts of the "Crucifixion" being, as we have said before, more or less refusions of those which distinguish his first work ; hence the extraordinary self-contemplation of this poet of sound ; hence, also, the self-repetitions ; and hence the (as it were) dyeing-in-grain of that mannerism which at once proclaims the composer, after the hearing of a single phrase. With these drawbacks, it will be immediately comprehended why his second production did not take the same rank in public esteem and favour with his first. Had it not been brought forward, with its new title, this year, the performance in 1837 would have been deemed sufficient ; for it had passed from the minds and interest of those who then heard it. The finest portions are, the overture, the storm scene, and the concerted music for the women.

The oratorio, and, indeed, the whole festival performance, was got up with a feverish zeal and assiduity. For weeks before the event, the whole stream of paragraphing, and announcing, and puffing, was laid on from the main, and the steam-press pumps were kept constantly going ; not judiciously, however, for they were over-worked ; and thus the main-spring and intention of the whole machinery became apparent to the most obtuse intellectual vision.

The Sacred Harmonic Society have given two or three public performances since our last publication ; but they have consisted neither of novelties nor revivals of standard oratorios. Handel's "Solomon" and the "Judas Maccabeus" have each been twice repeated to undiminished audiences, and in addition to the regularly engaged principal singers—Miss Birch, Mrs. T. Severn (late Miss Caw-

thorn), Messrs. Hobbs, Turner, Young, Phillips, and A. Novello—the committee judiciously secured the assistance of Miss Masson in the “Solomon,” whose finely cultivated style of singing is a sure source of gratification to every educated musician. At the opening of the year, we have been informed that some novelties now in practice will be produced. The new psalm of Mendelssohn, “As pants the heart;” the fine ode of Romberg, “The Transient and the Eternal;” and one of Haydn’s masses. So excellent a spirit and energy sways this amateur society, and they have attained to such perfection in choral singing, that we have little doubt, if they apply their faculties to the task, they could accomplish Beethoven’s great mass in D; and let them once achieve this gigantic work and they may throw down the gauntlet to all Europe; for even throughout Germany there is not the same body of amateurs that can compete with them. A greater fallacy does not exist in this country than the belief in the high and classical state of musical cultivation in Germany. The professors, it is true, maintain their envied supremacy; but the music of the general population is all but confined to quadrilles and waltzes; and the majority would rather at any time hear the “Sommo ciel” of Pacini, than the “Non piu di fiori” of Mozart. If the science of music formed but a division of our national education, as it does in Germany, the English, with their intellectual motive power and restless activity, would outstrip them in the course of a very few years. The best of the German professors privately acknowledge the declension of classical taste among their countrymen; and it is constantly evident to every educated musician who travels through their principal towns, Berlin, perhaps, alone excepted, where the best music is still to be heard. When it is considered what has been done for sterling music in this country during the last twenty years, by individual exertion, unaided by the court, the legislature, or the educational body, and what is still doing; when we see the host of amateurs in Exeter Hall performing, and the 2,000 listening with gratified countenances to music of the highest class; when, in one factory in the north, you shall witness one or two hundred people turn out and, at a moment’s notice, sing you a chorus from the “Israel in Egypt,” and in an iron foundry (as we know) you shall hear the hard-fisted operatives play an overture of Weber’s, if not with professor-like finish, with laudable correctness; when it is considered, we repeat, what has been done, and is still doing in England, in behalf of the science, the French, with their ignorance of facts, and dull pertness, may go on asserting, till they

are modest, that we are not a musical nation. But where is the proof that *they* are such? Where are their choral societies? where are their amateur societies? where are their festival meetings? wherein consists their patronage of the art, but at their theatres, and in their *talk*? What native concerto player in London was ever known to earn his bread by playing quadrilles at a private ball? This is not unfrequently the case in Paris. More than half the success, and *all* the ignorance of the Parisians, consists in assumption and assertion; the other half of their success arises from their local position in Europe. To return to our friends of the "Sacred Harmonic Society:" we hear good report of their stability, and that with the new year they will introduce to the subscribers their new organ, a large one, built by Mr. Walker, and which is to be exhibited to the profession by a public performance at his factory on the 23rd instant (December).

Having, in the course of the present article, mentioned the name of Miss Masson, we are reminded to say a word in recommendation of a society, projected, and mainly brought into action through her energy and sensible management. It is a society for the relief of decayed **FEMALE** musicians, formed upon the principle of the Royal Society of Musicians. The number of the professional sisterhood already enrolled is considerable: Her Majesty the Queen, the Queen Dowager, their R. H.H. the Duchess of Kent and the Duchess of Cambridge, and many of the influential nobility, have granted their patronage and support to this meritorious institution; and the result will be, we have no doubt, that in a very short time a large fund will be accumulated ready to afford casual and permanent relief to a class who have hitherto had no city of refuge in adverse times, no public storehouse to apply to in the winter of life. Previously to the formation of the society, Miss Masson caused an application to be made to the brother institution, for the purpose of ascertaining whether the members were inclined to revise the laws of the society, for the purpose of admitting female members of the profession, upon paying the usual annual subscription; and their declining to entertain the proposal led the way to the instant formation of the new society. We are unacquainted with the reason which led to the rejection of so plausible a proposition that an unmarried female professor, or widow, with perhaps a family dependent upon her individual exertions, or deprived of them by sickness, and who would personally contribute her subscription to the society the same as a male member, should be refused the assistance to which such a one would be enti-

tled in case of necessity. It is true that the Royal Society, in a host of instances, gives relief to the needy widows and children of their own members; but why refuse a *double* subscription from families where both the heads of it are professors? and, still more, why refuse to admit female members who are single? Had the late Mrs. Cecilia Davis, who was the most celebrated singer of her day, who had been a favourite at several of the European courts, and had been instructress to more than one of the queens, been a member of the Royal Society, or had the Society of Female Musicians been in existence, she would not have been reduced to the deplorable necessity of relying upon the casual bounty of the humane, and finally to have died in penury. It is not unworthy of remark that, at their annual benefit concert, the Royal Society expect and receive the *gratuitous* assistance of all the *female* performers they may require; and yet, should the half of those ladies grant their services for twenty years, remain unmarried, and in advanced life be deprived of the means of self-support, they must retire to a union poor-house; for, by its laws, the Royal Society would not be authorized to indemnify them for the benefit that had accrued to their institution by their services for so many years. For these reasons, therefore, we earnestly hope for success, and will canvass support to the Society of Female Musicians. Of its *ultimate* prosperity we have no fear, having had occasion to witness the cheerful zeal and clear understanding of its acting—or rather *active*—lady president and director: that which it would give us pleasure to witness, in its present infantile state, is, the encouragement and support of the influential and the opulent.

There has been nothing in the way of musical novelty at the great theatres since the commencement of the season; if we except the appearance of a female singer at each house, and the revival of the Beggar's opera at Covent Garden, in the costume of the time in which it was written. The piece has been produced altogether with elegance and good taste. Miss Rainforth is the Polly, Mad. Vestris is the Lucy, and an excellent one she makes; and Mr. Harrison performs the part of Macheath. The chief interest in the piece is centered in the part of Lucy; for, independently of her clever acting, Mad. Vestris sings like a cultivated musician. Until the revival of this piece, and the production of Knowles's new play of "Love," the prospect for the female management was most inauspicious; now, the house has a fair portion of audience every night. So complete a lottery is a theatrical undertaking. At the same establishment a Miss

Austin made her first appearance in Mandane. She was announced to be a pupil of Mr. Welsh (not of any long standing, we should surmise), and, for the stage business, of Mr. Young. As the young lady quickly retreated from the line of profession she had most preposterously attempted, while in the very rawest state of musical accomplishment, no more need be said of her performance: nevertheless, the newspapers hailed her appearance with acclamations. The puffing stream was again laid on from the main, and the pumps were over-worked; yet all would not do. These hydraulic exhibitions are forcing open people's eyes. In a restaurant's at Milan, a short time since, Rossini recognised a foreign professor from London, who boasted to him, before the whole company, that the object of his visit to the continent was to purchase an estate with the property he had realized in this country. "You have made your fortune, have you?" said Rossini; "and how is S—— getting on?" "Very prosperously," was the reply. "Bravo! England is the country for humbug!"

At Drury Lane, a Miss Delcy, daughter of Mr. Rophino Lacy, has appeared, with some success. The young lady has, for some few years past, been known in the northern provinces, and was, we understand, a favourite at York and Hull: in her appearance, therefore, upon the London boards, she does not labour under the disadvantage of a noviciate. Her voice is strong, piercing, and extensive in the upper part of the scale: moreover, she comes to her London business with some knowledge of the profession, both as a singer and actress. She has more than one part to her back; for (having studied under her father several years) she is prepared to take the principal characters in most of the operas, both native and foreign, that have been adapted to, and are popular on, the English stage. She will, therefore, be a useful, although, we apprehend, not a highly attractive singer. A well educated and richly qualified theatrical soprano and tenor would, at this time, quickly realize an ample fortune; for our stage can boast of neither. The most agreeable series of entertainments, and consequently the most profitable to the authors of them, have been the quadrille and waltz concerts, which commenced at the English Opera House after the close of the last season, and have continued their performances every night to the present time. The band consists of sixty musicians, many of them principals at the Philharmonic concerts, all of them excellent players; and for one shilling admittance the purchaser is entertained with two of the most favourite overtures, an instrumental concerto, and a selection of the

best German and other waltzes and quadrilles. From their constant practice together, the performers have attained to so well combined a union, and so neat a discrimination of the lights and shades in execution and effect, that it is due to them to say that their concerts have been an intellectual treat to the cultivated musician ; while the large, and respectable, and attentive audiences, that each night throng the house, confirm the popularity of these rational and delightful entertainments. Upon one occasion, we heard a violin concerto performed in a masterly manner by young Willy (who, by the way, is an enterprising and successful artist), and Weber's overture to "Der Freischütz," which was, as it deserved to be, unanimously encored. Strauss's and Lanner's waltzes are far more meritorious, as compositions, than Musard's, which are commonplace and tricky, with solo movements for the keyed bugle or cornet à piston, and the new French flageolet—a squeaking, disagreeable pipe. Musard has come over to London, and, as we hear, was within an ace of concluding terms with the proprietors of Exeter Hall for the purpose of performing his celebrated promenade concerts ; but the righteousness of the worshipful body happily overcame their cupidity ; the horror of carnal tunes, and incitements to the unlawful pleasure of dancing, being thought a desecration of the building devoted to no less serious purposes than the performance of sacred oratorios and anti-popery meetings. In order to cancel the bargain, therefore, they insisted upon such stipulations that Mons. Musard would have been insane to accept. His band, we hear, consists of a hundred performers.

A NIGHT IN THE BLACK FOREST.

It was late in the evening when I arrived at a small inn situated in one of the most romantic vallies of the Black Forest. I was much fatigued with the day's journey ; and as the next post was several leagues distant I determined to rest a few hours ere proceeding on my way. The room into which I was shewn for the night was a large, ill-furnished apartment, and recalled forcibly to mind the descriptions I had read of haunted chambers in deserted castles, where the goblin throng might hold their midnight revels, or where some lone spirit might be doomed for years to wander, in ex-

piation of a fearful crime. It is a strange thing that though ghosts always prefer the dampest and most unwholesome situations for their lodging, yet we never hear of them taking cold. A ghost with a pocket handkerchief or a stick of Spanish liquorice would indeed be a "*rara avis*." The furniture of my present apartment consisted of a few old high-backed chairs, placed at regular distances against the wall; a curious old table, supported by four massive legs, on which were carved figures of griffins and sphynxes, and misshapen monsters. A bed occupied one side of the room, while the other was taken up by an immense overgrown wardrobe or clothespress, which seemed capable of holding not only the outfit of a large family, but occasionally the family itself. The walls were composed of oaken pannels, covered with various mystic characters, and strange unintelligible devices. Each pannel seemed ready to slide or turn or mysteriously disappear from its place, and disclose the entrance to some dark staircase, or display the skeleton of some ill-fated victim. The floor creaked ominously beneath each step, as though it were made up of trap-doors and moveable planks. The ceiling had evidently been painted with much care; and though now greatly defaced, still the sun and moon, surrounded by the signs of the zodiac, might be distinctly traced, together with sundry other horrific symbols. Even the covering of the bed was cabalistic. It was composed of an intricate piece of embroidery, representing a skull and cross bones resting on a coffin, round which was a large proportionable garnishing of hour glasses and scythes, intermixed with coiled snakes and radiant stars. One side of the room was adorned with a huge picture, the subject of which represented a beautiful female in an attitude of supplication, apparently entreating a very fierce-looking gentleman to spare the life of her child. The mother's look of unutterable anguish, and the unconscious placidity of the infant, contrasted with the ferocious and pitiless expression of the relentless murderer's features, as he seemed about to plunge a dagger into the helpless victim's heart, were well portrayed, and the painting was evidently the production of no mean artist.

The inn where I now was had originally formed part of a baronial castle, which had long since become a dismantled ruin. One tower, however, which had suffered least by the ravages of time, had been put so far in habitable repair as to afford a tolerable shelter to the weary traveller. The painted ceiling and hieroglyphic'd walls of my present chamber seemed to indicate the peculiar pursuits of one, at least, of its former possessors. It had probably

formed the study of some astrologer or professor of the black art ; an art which, even at the present time, in many parts of Germany, still has its votaries. After refreshing myself with such things as the house afforded, I sent my servant to retire for the night, desiring him to call me early in the morning, it being necessary that we should leave by daybreak. As the sound of his receding footsteps died away, I could not but feel an almost fearful loneliness. The time, which was midnight ; the perfect stillness that prevailed ; the mysterious subjects that surrounded me, together with the strangeness of the situation, all tended to awake associations of a vague and speculative nature. I threw open the window, and looked out upon the prospect. It was a clear autumnal night : the stars shone more bright than usual ; while the moon guided her silver car through the glittering host, shedding a calm soft light upon the scene. The landscape was wild and romantic beyond description. The building stood upon a projecting rock overhanging a deep ravine, down which a mountain torrent rushed impetuously, but at such a distance beneath, that the sound of its foaming waters scarcely reached the ear. On the opposite side of the glen, the ground rose gradually height above height to a distant lofty ridge ; the whole surface clothed with a broad black forest of towering pines ; while here and there a rugged peak, or the crumbling tower of some decayed fortress, stood out in bold relief from among the sombre foliage. I turned from the contemplation of this scene with feelings strongly partaking of its dark solitary features, and took another survey of my strange lodging. I opened the old clothes press ; it contained nothing but a broken rifle, two or three tusks, apparently of the wild boar, several implements of the chase, and a huge bright clasp knife, similar to those used for cutting the throats of the deer and wolf, when the ball had failed to complete the work of death. I next turned to decipher the writing on the wall, but the "mene, mene," was totally unintelligible. I could not expect to find another Daniel in the wolf's glen, so I contented myself with supposing that it meant nothing. But the picture more and more rivetted my attention ; I could not take my eyes from it ; there was something so cold, so heartless, so demoniac in the expression of the assassin's countenance, contrasted with the gentle, the tender, the imploring look of the beautiful creature as she knelt before him, clasping her child with one hand, while with the other she seemed to deprecate the fate that awaited it. There was a fascinating spell about this group which I could not resist. In vain I turned from it. The figures still haunted me. Could

this fair creature have been spirited away by some mountain demon, and compelled to yield to his embrace in order to save the life of her infant? or had she been a victim of the mysterious black tribunal; the dread secret council, before whose subtle machinations thousands had trembled? I imagined to myself all the horrors of those inquisitorial assemblies, held deep within some subterraneous chamber, from whence all cries for mercy or justice would be alike in vain and unheeded. From these vague speculations I next turned to the thought of danger more definite, and more immediately connected with my present situation.

At the time of which I speak, that part of Suabia was infested with a band of robbers, whose depredations had spread terror throughout the surrounding district; and when I reflected on the loneliness of the spot, and called to mind the many stories I had read of unwary travellers being entrapped into the hands of these banditti, I own that dread of spiritual visitors gave way before fears of more substantial enemies. I was totally unarmed. Here was a situation! What was to be done? I thought of the knife which I had seen in the press, and instantly possessed myself of the weapon. It was a broad bright blade: as I placed it under my pillow, I felt my courage and confidence return. At length the fatigues of the day completely overpowered me, and I sank gradually into a profound sleep, the images and realities of the present strongly blending with the visionary and fleeting nonentities of a dreamy ideality. How long this state of unconsciousness lasted I know not, but I was aroused by a dull grating sound, which was apparently close to me. I started and looked round, the candle was still burning on the table, and distinctly shewed me every object in the chamber. There was the dusky ceiling, the curious pannels, the large legs of the old table, all clearly defined. And as the light fell upon the picture it seemed suddenly animated. While I was gazing, all at once it began to slide from its place, and disclosed an aperture in the wall, from which a dark-looking object slowly emerged. The figure, which was clothed in slight drapery, advanced a few steps. I saw it was a woman; and I was about to speak, when she imposed silence by laying a finger on her lips, while with the other hand she beckoned me to rise. I felt an irresistible impulse to obey; and, snatching the knife from the place where it was deposited, I was instantly at her side. "Your life is in danger," she hurriedly whispered, "but fear not, I will save you; follow me." By the aid of the dull light, I perceived, through the opening in the wall, a narrow, dark staircase, down

which my mysterious guide proceeded, bearing in her hand a small lamp. I attended silently on her steps ; after descending for some time, we found ourselves in a low arched gallery, cut in the solid rock. This passage led us to another stair and another gallery. On, on we went, there seemed to be no end to the turnings of this subterraneous labyrinth. Now we crossed a spacious hall, the roof of which was painted similar to that of the chamber I had left. The lamp of my conductor shed a sickly light around. The walls appeared covered with grotesque figures ; while the floor was of curious mosaic workmanship. Now again we threaded the intricate mazes. Sometimes the sound of distant revelry broke upon the ear ; and sometimes the smothered cry of some one in distress came wailing through the stillness ; and then again all was still. I felt a horrible chillness come over me : I had no power to retrace my steps, which seemed urged on by some invisible spell.

At length we emerged from the gloom, and found ourselves standing on a ledge of rocks, which projected from the face of the precipice far beneath the foundations of the castle. A narrow path led along the extreme edge of the cliff ; it had no guard ; the ground was slippery ; one false step, and destruction was inevitable ; but my guide went forward with a firm foot, seemingly unconscious of the danger, and I followed. We soon came to a rude bridge, formed of a single tree, thrown across the ravine. She passed it ; I paused. The torrent raged far, far below. I turned to the sky ; a scowling tempest darkened the heavens. In another instant my foot was on the bridge ; I heard the timber crack ; I felt the support sinking from under me. With a desperate effort I sprang to the opposite side ; and the same moment the old trunk fell crashing into the chasm beneath. A thousand echoes reverberated to the shock ; amid the din I heard a wild discordant laugh, which sounded like the yell of a disappointed fiend. My blood ran cold : I turned to my conductor. The breeze had blown aside the drapery that concealed her face, and, to my horror, I saw distinct upon her forehead a broad deep streak of blood ; while her eyes, which protruded from their sockets, seemed to sparkle with a wild unearthly gleam. "Quick, quick to the forest !" she exclaimed, "or we are lost !" I had no power to resist ; and as she rushed along through many a tangled thicket and umbrageous grove, I followed as well as the broken nature of the ground would permit. At length we paused before the gateway of a ruined castle. Two colossal figures of misshapen animals guarded the entrance : we passed them. We stood beneath the massive portal ; we crossed the

court yard : it was overgrown with long grass, and strewn with large fragments of stone, which had been detached from the overhanging battlements. We entered a low dark arch, and descended a long flight of broken steps leading to a narrow gallery, the floor of which very considerably inclined downwards, and seemed conducting us into the bowels of the earth.

After following this for some time, our farther progress appeared to be finally arrested by a solid mass of stone, which totally obstructed the passage, and which would seem to defy any human power to remove it ; but, to my surprise, it yielded to the first touch of the strange being who had guided me thither. The vast block of granite turned as if poised on the most delicate point, and we passed through the opening ; the door closed behind us, and I felt that all chance of retreat was impossible. And now we traversed several apartments ; some of them spacious and lofty, others low and contracted. From the walls of these chambers projected various hooks and strong bars of iron, to some of which chains were attached ; and through the darkness visible I could occasionally discern the dim outline of a human figure, stretched on the wretched couch afforded by the cold, damp floor. I was bewildered with conflicting feelings, and determined to proceed no farther without some explanation. But where was my conductor, my betrayer, as I now began to think her ? She was gone ! I stood alone : the darkness was terrible ; the silence of this sepulchral vault was fearful. I listened with the most painful intensity. Now I could distinguish a low muttering sound, as of voices at a great distance ; and now it was the stillness of the tomb. I groped my way in the direction from whence the sounds had proceeded, and soon discovered a faint streak of light, towards which I bent my steps ; but here another barrier of stone, similar to the one we had passed, obstructed my farther progress. The light seemed to come from beyond the massive portal, through a narrow chink in its upper edge. I determined at all hazards to proceed. The door obeyed my touch. The next instant I stood within a vast vaulted chamber, dimly illumined by several lamps suspended from the roof. At the upper end was a broad platform or dais, on which was placed a table of stone ; round this several men were seated : they were enveloped in long black cloaks, and all wore masks. An axe and a coil of rope lay in the centre of the table. At one end there was an elevated throne, which was occupied by a gigantic figure, holding in his hand a naked sword. Opposite to this fearful being, and at a short distance from the table, the delicate figure of a female knelt in a supplicating attitude, clasping

fondly to her breast a beautiful child. By her side stood a familiar of this infernal tribunal, a wretch whose fiendish countenance and upraised dagger showed him at once ready and willing to obey their bloody mandates. My entrance had not been observed, and I gazed upon the group for some time with mingled feelings of astonishment and dread. No one spoke, and I began to think it was some strange delusion, when the silence was broken by a voice so sweet, so gentle, so imploring, that, as the tones fell upon my ear, they seemed at once to reach the fountain of the heart's tears: they came from that kneeling suppliant, and were full of intense agony. "Oh! if there is one kindly thought, one gleam of pity, one spark of human sympathy in your hearts, look upon a forsaken, an oppressed, broken-hearted creature, and protect this innocent, this unoffending child! Surely there is some kindred chord in your hearts which its utter helplessness must awaken. Surely there is some memory of a mother's love, of a mother's anguish, some link which associates you with the past, some tie which unites you with the future. I implore you by all you hold most dear on earth, and by all your hopes of a blessed hereafter, to spare the helpless innocent!" She paused, and the president replied, in a harsh, grating voice, which seemed ten-fold more discordant in contrast with the sweet and plaintive accents of the suppliant—"It is in vain to plead for mercy here, lady. Your husband has dared to lift his voice against this council: our vengeance is upon him. You know his hiding place: conduct us thither, and you are free; refuse, and your child dies before you, its blood be on your head!" For a moment there was a breathless silence. "Strike!" continued the inexorable judge. The dagger was raised; when an appalling shriek burst from the victim, and, starting to her feet, she exclaimed, with the wildest energy, "Never, never will I betray him! and yet, friends, I will disappoint your hellish malice." In an instant she seemed endowed with supernatural strength, and rushed with the rapidity of lightning towards the place where I stood. For the first time I now perceived at my feet a loathsome pit; and I at once saw that it was her intention to cast herself down this yawning grave. But she fell ere she reached its brink: her eye rested upon mine. Never shall I forget the agony of its expression. "Save me!" she cried; but I had no power. A horrible sensation came over me: a sickening palsy oppressed me. I seemed deprived of speech and motion; the lights faded; the air became murky; the floor shook beneath me; a thousand phantoms passed around. I closed my eyes; there was a sound as of a heavy falling. I looked again: a

tall gaunt figure stood before me, bearing in one hand a taper, in the other an earthen pitcher. I gazed bewildered ; he spoke—"It is time to get up ; I suppose you will shave this morning?" IT WAS MY OWN VALET !

MISCELLANEA METEOROLOGICA.

GREAT MALVERN.

THIS place is situated at an elevation of about five hundred feet above the level of the sea, and four hundred and fifty above the vale of the Severn, which lies below. The town has a full eastern aspect, and the pointed summits of the hill rise nearly a thousand feet immediately behind the houses. It has been the occupation of my leisure to observe twice daily the barometer, thermometer, &c., with a view to determine the mean temperature, pressure, and dew point, at this interesting locality, where an extended plain and distant horizon present peculiar facilities. In doing this, a series of miscellaneous meteorological facts and observations have been accumulated, which, besides being interesting to the general reader, may possibly suggest considerations to those persons similarly engaged with myself. In the following remarks, it has been my endeavour to keep closely to the language in which they were noted down at the instant, a more vivid sketch of the impressions made at the time being thus given than would have been the case, perhaps, in a more elaborate paper.—W. A.

ON FOGS AND FROST, &c.

The visible forms assumed by the vapour of the air are very various, being sometimes piled in fleecy masses of cloud in the higher regions, at others resting upon the earth in the form of mist or fog.

It frequently happens, when there is a thick fog in the vale, sufficient entirely to obscure the sun, that the atmosphere only a little height above is quite clear. When this happens, the temperature above the fog is warm, and the air clear and dry. The temperature in the fog is cold, OFTEN VERY COLD, and the air damp and chilling. The following facts and remarks establish these points :—

Nov. 20, 1829.—This evening I had occasion to leave home. The stars were shining brightly, and the hill above was dark and clear ; a sea of dense

white fog rested just below. On descending the hill out of the village I soon entered the fog, which was so thick that I could hardly discern objects at a short distance. On my return some hours after, the fog was still as dense as ever; a few stars only could be faintly seen in the zenith. As I ascended the hill the fog gradually appeared to thin off; and at last I suddenly emerged from it into a clear, brilliant, star-lit sky, the dense vapour still brooding over the lower parts of the country. The following morning I found all the fields and trees below thickly covered with a beautiful hoar-frost, whilst the trees, the fields, and every thing around this place, together with the whole of the hill above, were quite free from any of it.

OCTOBER 8, 1833.—Very thick fog all the morning here; *beautifully clear, with sunshine, on the hill.* Wind light westerly.

31st, 9 a.m.—Therm. 58 deg.—Weather calm and fine; very foggy down below. I was in Worcester at 3 p.m.; the streets were there quite wet and very dirty. The fog had been very thick there all the morning; we have had none here, and our roads are quite dry. Here all are remarking upon the closeness of the weather and the unusual warmth; we have been without fires the last three or four days, and are so now.

FEBRUARY 7, 1834, 9 a.m.—Barom. 29.650; therm. 36 deg. A sharp frost, during the preceding night, in the country below, and on the other side of the hill, with ice in the low places; nothing of the kind here, except a slight tinge of hoar upon the summit of the hill. Therm. last night only 33 deg. Atmosphere at noon very clear and transparent, but the fog is thick below. At 2 p.m. (therm. 41; hyg. 34) very fine indeed; not a cloud. Notwithstanding the very wet state in which every thing appeared, and the dense fog below all the morning, and although the sun has been removing moisture from the ground at a rapid rate for some hours, still the *dew point* indicated by the hygrometer is only half a degree higher than the temperature of the air during the night, which caused the foggy precipitation; while the temperature of the atmosphere has advanced 7 deg.

FEBRUARY 9, 1834.—*Yesterday* the wind was southerly, with heavy rain and snow. Barom. rising; thermom., at 1 p.m., 41 deg. *This morning*, at 8 a.m., very dense fog in the vale below; less so here; on the hill above, splendid clear sky, warm sun, and no fog. At 9 the fog became denser here, and so continued more or less throughout the day. At noon the trees and hedges were dry; about 4 p.m. they became dripping with wet; and at 9 p.m. (thermom. 32 deg.) the drops are, in many places, frozen; posts, rails, &c., are covered with a thin sheet of ice. Fog thick; a few stars are twinkling in the zenith. How is it that the trees and hedges are not covered with hoar frost from a freezing temperature and thick fog? I am just come in from a walk half a mile out of the village; there is not the slightest appearance of freezing any where upon the road. It is surely unusual for drops of water hanging upon trees and hedges to be frozen hard, without the slightest indication of freezing upon the exposed road. How is it, if the twigs are cold enough to freeze the drops, that the fog does not assume the form of hoar frost upon them?

DECEMBER 11th.—Very foggy down below; the fog just reaches up to the village. On the hill above the air is clear, with brilliant sun. The fog cleared away from us at 5 p.m., when the thermometer rose a little.

12th, 9 a.m.—Very foggy below; very fine, with sun, here. The ther-

meter fell early this morning in the vale, in the fog, to 27 deg.; *but here (Malvern) it did not descend below 32 deg.*

DECEMBER 24, 1835, 9 a.m.—Therm. 22, Hygr. 31. The fog has been dense below, sometimes coming up to the village, and then receding. A little way above, the air has been altogether clear and warm. The trees just above us do not show a vestige of hoar frost; the same may be said of the trees here. Every thing below us is thickly overspread with silvery crystals of hoar frost. 3½ p.m.—The air here is just now perfectly clear and transparent, and it feels warm; the thick fog remains below, where the trees, the hedges, and the ground, are thickly covered, as with snow, whereas as everything close to us up here, especially the beautiful hill above, looks black and dark, strongly contrasting with the whiteness below. 5 p.m.—I have just been up the hill a little way, the moon and stars shining brilliantly. On reaching St Ann's Well, about 200 feet above, the air felt so mild that I went into the cottage and asked for a thermometer; after ten minutes exposure to the open air, it stood at 30 deg. On returning home, I came into the upper stratum of the fog, and found the thermometer out of my dining window 20 deg. This great difference induced me to take my own thermometer up the hill, and I went to a cottage distant not more than 200 yards. Here I found, as I did on first going up the hill, that a mild and light westerly air was blowing, not observable in the village; the thermometer rose to 30 deg. I took care so to carry the instrument that the mercury was not warmed by my hand; and that this did not occur was shewn when, on reaching my own house, I found it had again fallen to 24 deg. ! At 11 p.m., the air having been free from any fog for some hours, the thermometer stood at 25 deg.—i. e. 5 deg. higher than it did about 5 p.m., when the fog just reached us.

DECEMBER 25, 9 a.m.—Thermometer, 26 deg. hygr. 25 deg. Very hard frost. This morning, the ring of dew on the hygrometer certainly not frozen at 25 deg. Fogs still below; there is no hoar frost at all up here now, the little that was seen yesterday on some of the lower trees of the village has disappeared; it has evaporated without melting. When the fog thins away a little, the trees, hedges, ground, and every thing below us, can be seen most thickly covered with a magnificent frost-work.

26, 9 a.m.—Thermometer, 29; hygr. 24.—S. E. breeze. Fine, with clear sun. It is still very foggy down in the vale below. *A strong S. E. breeze is blowing here, but the fog below looks still and dense.* 11 a.m.—Very fine, sun, and light southerly breeze. The thermometer here at my house, in the shade, stands at 32 deg. I just now took the same instrument up to the Shrubbery, a house just above, where it rose to 35 in the shade! I then carried it in the same manner, and with the greatest precautions, down below, not more than 200 yards down the road, but into the upper stratum of the fog, when it fell to 18 deg. ! I have marked in my journal, "*really and undoubtedly a fact.*" I went down again. *The thermometer in the shade, out of my window, 31; at the Firmor Arms I found it 22 deg.; and at the turnpike gate 17 deg. ! the whole distance not more than 250 yards.* I then carried the thermometer in my hand for two hours in a walk down to Bernard's Green; every thing very white with hoar frost, and the fog thick, the air calm, and the thermometer at 17 deg. rising gradually in my hand, during the last half hour, as clouds began to form in the higher regions, to 20 deg. On as-

cending the hill to get home, which occupied me about ten minutes, I found the thermometer rapidly rising—first to 22, then to 28 deg., and on entering my house it reached again to 31 deg. and then 32 deg. Here, then, is a difference of 15 deg. of temperature in a distance of not more than 250 yards; shewing what great differences may exist within a few feet perpendicular measurement, the warmer stratum floating over and resting upon the lower cold one.

DECEMBER 25, 1835.—The same weather continues. Fog below, with most splendid hoar frost; none here. It really seems going into another climate to descend the hill (maximum of thermometer to-day, 32 deg.; now midnight, 30.5, clear, stars. It is worthy of remark that, although there has been now seven hours of clear sky since sunset, yet the temperature is only half a degree colder than it was at 5 p.m., and not two degrees lower than the maximum of the day.

DECEMBER 27, 9 a.m.—Therm. 35 deg.; hydr. 35 deg. On getting up this morning, I could see from my bed-room that the fog had nearly cleared away below, leaving only a slight mist. The whole of the beautiful hoar frost disappeared, as if by magic, during the night. The air is now generally clouded over, and the wind is getting up from the S.W. The great and extraordinary differences of the temperature between this place and the vale are now destroyed; the upper current has gradually mingled itself with the lower, and the temperatures are equalized—mean of thermometer to-day 37 deg.; at 11 p.m. 34 deg. The breaking up of this frost, which has been very severe in the lower country, is worthy of remark: it has taken place without any other visible change than the disappearance of the fog below, and the formation of some clouds over head. The maximum of the thermometer on the 28th rose to 48 deg.

The following is a tabular view of the temperature during this frost at Malvern and Severn Stoke. Severn Stoke is a small village on the banks of the Severn, about five miles from Malvern, and quite in the vale. The temperature there was taken by a friend, whose thermometer had been previously compared with mine.

1835.	MALVERN.	SEVERN-STOKE.	
Dec.	Minimum.	Minimum.	WEATHER.
20	28.5	27	Snow.
21	29	29	Easterly wind; fine.
22	28	28	Clear, stars, fine sunny day.
23	24	16	Hoar frost, a fog below.
24	20	16	Fine, stars, fog below, calm.
25	19.5	17	Very hard frost; a fog has been up in the village.
26	23	18	Very foggy down below; none up here.
27	30	11	Weather changing.
28	33	33	Westerly wind.

In the above table, it will be seen how much colder the weather was at Severn Stoke than at Malvern. In the night between the 26th and 27th the thermometer fell, in the former place, to 11 deg.; in the latter, no lower than 33 deg. The lowest temperature occurred about the hour before midnight. The following night both have the same temperature.

NOVEMBER 18, 1837.—This is one of those remarkable mornings which we frequently witness from this place. *Here is a fresh S.W. breeze, a warm temperature, and no hoar frost*; the sky is thickly overspread by nearly stationary clouds. I am just returned from the vale below. *There, is a dense fog, a cold calm atmosphere, and a snow-white hoar frost. Rain fell the following day again.*

NOVEMBER 25, 1837.—A beautiful morning, clear sky, and sun. The thermometer fell in the night to 35 deg. There is no indication of frost here. Down in the vale the fields are very white indeed, and all the pools are covered with a pretty thick coating of ice.

The upper surface of a fog is constantly oscillating, sometimes rising up, and then again subsiding.

Very often the thick fog from the vale just reaches the village. I have seen the church completely hid, the pinnacles on the tower only appearing above it. At other times the fog will ascend higher; the hill above will be in a brilliant sunshine, whilst all the houses, and everything here, are shrouded by the mist. Occasionally a fog will go on for two or three hours oscillating to and fro; sometimes, for a little while, obscuring all objects around, and then again receding, to leave them clear. I have thus often had an opportunity of seeing the various movements of the upper edge or stratum. On one occasion, the fog moved in totally opposite directions; the lower portion had a slow movement from the east; just above that was another bank of vapour carried briskly onward by a strong southerly breeze.

FEBRUARY 16, 1830, 10 p.m.—A very dense fog in the plain below, the top or surface reaches just up to the road running through the village. Atmosphere quite calm; stars bright. I had occasion to ascend the hill to a house a little way above; on looking down, I saw the lower parts of my house enveloped in fog, while the upper stories were quite free from it. The body of the church was hid by the fog; the steeple rose majestically out of it. There was a striking sensation of warmth in ascending the hill out of the fog, and of cold in descending into it: the ground frozen quite hard.

I have often seen the dense fog, which sometimes so absolutely shuts out the country below, lie quiet, in even ridges, before sun rise thus.—(See fig. A). But when the sun's rays begin to shine upon it, it rises, in various places, into conical-shaped masses (see fig. B), shewing the first commencement of the rise of the fog. When these conical heaps thin off or dissolve away in their upward progress, a *fine* and perhaps clear day ensues; or if they assume in the higher regions the form of detached rounded clouds, the weather will be fine; but when they form a continuous even sheet of cloud, rain generally succeeds.

Fogs are sometimes so dense that we can very readily see the particles composing them; at other times, when the fog seems equally thick, the separate particles are not so easily detected. Some fogs do not wet anything, whereas others render every thing with which they come in contact quite moist. Some fogs soon condense or settle upon the hat, the hair, or clothes; others will hardly do so.

When the temperature is very low, and the air filled with a dense fog, are the particles or vesicles frozen?

Can the vesicles of vapour constituting a fog preserve a temperature of their own, or a condition uninfluenced by the temperature of the air in which they are floating? I have seen a fog, the air being at a temperature many degrees below the freezing point, the little vesicles or particles of which in no wise differ from those of fogs at higher temperature. How is it, in such a temperature, that the particles are not frozen? or, if they are so, how do they attach themselves to twigs in the form of hoar frost? They seem to freeze only when they first adhere, and not to be frozen before; the jutting twig first, and then the fibre of *rime*, forming the point of attachment, freezing particle after particle.

DECEMBER 24, 1836, 9 a.m.—Thermometer, 22; hygrometer, 31. Fog below, sometimes reaching up to the village. The little vesicles or particles can be very plainly discerned by attending to them sailing along against a dark back-ground. They do not appear at all different from those seen when the temperature of the air is 40 deg. or more; perhaps they are smaller. This morning, when the bulb of the hygrometer was reduced to 21 deg. (i. e. 11 deg. below the freezing point) the ring of dew was *deposited* (I think) in a fluid state, though it froze almost immediately afterwards.

DECEMBER 25, 1836, 9 a.m.—Therm. 24 deg.; hydr. 19 deg. Although the dew point is so low—13 deg. below the freezing point of water—yet the ring of dew deposited on the instrument when it first appeared *was not frozen, I believe.*

MARCH 7, 1837, 9 a.m.—Therm. 42 deg.; hydr. 22. *The ring of dew on the hygrometer not frozen.* It did immediately on being touched with the point of the finger.

It frequently happens that a cloud or mist envelopes the pointed summits of the hill, while the vale below is quite clear.

This is most frequently seen in damp warm weather, or after heavy rains; its occurrence shews that the constituent temperature of the invisible vapour (or the dew point) and the temperature of the air are nearly equal. Should it happen during an interval of frosty or fine weather, it may be taken as the sure forerunner of approaching change, with rain. This cloud remains apparently stationary, even in the most windy weather; because the vapour continually forms and becomes visible on one side, while it again dissolves and disappears on the other. It sometimes increases considerably, so as to form quite a dense cloudy stratum spreading out to a distance from the hill side, subject to the same increase on one side and decrease on the other, the air in all other directions remaining clear.

APRIL 17, 1834, 9 a.m.—Barom. 29.840; therm. 39 deg.; hygrom. 38 deg. Wind light northerly; very foggy early. Now the fog has just risen above us; it is gradually disappearing as the temperature below advances. Every now and then a portion curls downwards, and then it immediately disappears.

NOON.—Therm. 51 deg.; hydr. 42 deg. *The temperature has now outstripped the dew point. At 9 in the morning the difference was only ONE DEGREE; now it is NINE.* All the fog has cleared, the wind blows from the S.S.E., and the sun shines.

EVENING.—11 p.m. It has been a beautiful day. At 5 the heavens were

thickly studded with high, delicate, pencilled cirri, moving very slowly from the west; below these were some rounded cirri-cumuli, moving with the wind from S.S.E. At this moment (11 p.m.) the heavens are clear, except towards the summits of the hill, where there are low, foggy, misty clouds forming, and moving from the east (therm. 41 deg.; hyg. 40. The hill condenses the vapour into thin cloudy expansions, which it is curious to watch. They begin to be just perceptible in the zenith, where, quickly enlarging, they spread out into a thin, white, almost transparent sheet; and becoming much more dense where they strike upon the summit of the hill, pass out of sight to the westward. These clouds are about three or four hundred feet above us. Their visible formation indicates how alight the circumstances may be which convert invisible vapour into cloud; for the hill some distance off determines the formation of cloud in our zenith. *Hence there are certain states of the atmosphere* (the temperature of the air and the dew point nearly the same) *when the hill condenses aerial vapour into cloud, the heavens in all other parts remaining clear.*

It sometimes occurs that a fog lies in the vale, and a cap of mist obscures the summit of the hill, with a clear interspace between.—(See fig. C.)

MARCH 1, 1830.—Wind S.W. Cloudy for the most part; mist obscures the summits of the hill; fog in the vale below; clear here.

MARCH 12, 1837, 8 a.m.—Snow covering the ground. Here the air is clear, the sun shines, and a light southerly breeze is blowing. In the vale, there is a long line of dense fog, which ends abruptly about half a mile below.

10 A.M.—Low clouds are forming, they cap the summits of the hill; the fog, although not so dense, still lies in the vale. Here the snow is all melted (therm. 37 deg.), and there is none now on the hill; but the meadows are still white with it below, and the trees are incrustated with crystals of hoar.

NOON.—The temperatures are equalized; the snow and hoar frost have disappeared below.

DECEMBER 16, 1837.—A rainy day, with S.E. breeze. In the evening the weather cleared up. 9 p.m.—The moon in the east shone brilliantly upon us here, shewing the dense fog in the vale, and also that the hill above was clothed by a sheet of vapour, which extended to the zenith; in fact, this place was in a clear space between two beds of vapour, an effect I have attempted to shew in fig. C.

The preceding facts tend to establish the existence of different strata in the atmosphere, or various currents, above one another, having different temperatures. Wherever the colder strata or cold currents are passing, there the visible condensation of vapour takes place. *If the coldest stratum rests upon the earth, there will be a fog; if it is more or less removed from the earth, the clouds will be higher or lower. Should there be two or three cold strata or currents interposed by warmer ones, there will then probably be two or three layers of clouds, with clear interspaces.* All these phenomena are produced, not by temperature alone, but by its influence in conjunction with the mingling of vapour of different densities, brought about by the currents of the atmosphere.

TEMPERATURE.

When the air is clear, the thermometer usually declines steadily throughout the night. But it occasionally happens, when the atmosphere is perfectly free from cloud, that the temperature does not fall between sun-set and sun-rise; it is either stationary or rising.

DECEMBER 10, 1829, 6. p.m.—A canopy of dark clouds cleared off, leaving a bright blue sky. At 11½ p.m. air still clear, with a brilliant full moon; yet the temperature is just the same now as at six. Captain Back, in his *Narrative of the Expedition of the Terror*, remarks, “January 2, 1837.—The barometer has reached the unusual height of 30.84, and, which is equally singular, the barometer rose from 34 deg. minus to 13 deg., under the influence of a clear blue sky and calms—a fact,” he goes on to say, “utterly at variance with all my former experience.”

A temperature above the mean or warm weather in winter does not at all depend upon the sun, but upon the movement and condensation of aqueous vapour.

A temperature above the mean or hot weather in summer is owing to the sun's influence in a clear sky.

In summer, when the air is free from cloud, the sun's rays rapidly augment the temperature in the shade. In winter, with a clear atmosphere, the sun's influence does not counterbalance the terrestrial radiation. Hence, in clear weather, at this season, the temperature is below the mean.

The following facts and observations will illustrate these remarks:—

NOVEMBER 5, 1833.—Wind blowing in gusts the whole day from the westward.

Thermometer, at 9 a.m.	46 deg.
" 10 a.m.	48 deg.
" 11 p.m. ...	55 deg.!

Dark heavy clouds forming towards evening, followed by heavy rain.

NOVEMBER 16, 1833.—Damp, foggy, cloudy.

Thermometer, at 9 a.m.	35 deg.
" 2 p.m.	42 deg. (rain)
" 11 p.m.	46 deg. (rain)
" 12 p.m.	48 deg. (cloudy).

DECEMBER 29, 1834.—Thermometer, at 9 a.m. 40 deg., at 11. p.m. 48 deg.

JANUARY 3, Thermometer, 9 a.m., 39 deg., rising to 44 deg. at 11 p.m.

SEPTEMBER 23, Thermometer, at 11 p.m., 51 deg. and before sun rise the next morning, 58 deg. This day, I have remarked, presents us with a thorough wintery indication; the thermometer rose during last night higher than it reached during any part of the last two days.

In clear weather, during the winter, the thermometer in the shade may rise several degrees above the foregoing point, and yet the hoar frost in the shade remain undissolved; shewing, as I have before observed, that at this season the radiation of heat from the ground, in shaded situations, more than counterbalances the influence of the sun; and consequently that warm weather in winter does not depend upon the sun, but upon the movement and condensation of the aqueous atmosphere.

FEBRUARY 14, 1830.—A clear sunny day, with a considerable quantity of hoar frost. At 10 a.m. a thermometer, with the bulb blackened and exposed to the sun, stands at 70 deg.; and another hung up in the shade, twelve feet from the ground, is 39 deg.; yet the hoar frost is still sparkling on the grass, in the shade.

MARCH 4, 1830, 9½ a.m.—Atmosphere clear; hoar frost still upon the grass in the shade. Thermometer with dark bulb, in the sun, 83 deg.; another in the shade, 36 deg.

JANUARY 2, 1835.—The sun shines warmly; the thermometer in the shade marks 37 deg.; yet everywhere out of the sun's rays the delicate spiculae of hoar are not melted. The atmosphere is free from cloud.

JANUARY 16, 1836.—A beautiful day, sun throughout; yet in the shade the hoar frost does not melt, though the thermometer in the shade stands at 37.5.

Fig. D. shews the courses of the thermometer and barometer during a very remarkable change in the weather, in July, 1834. The dotted line refers to the temperature and to the figures on the right; the other, to the barometric pressure and to the figures on the left. It will be remarked that the barometer began to fall on the sixteenth of the month, and continued to do so rapidly until the morning of the nineteenth: at the same time a continued heavy rain fell, commencing on the morning of the eighteenth, and lasting, with hardly any intermission, till mid-day on the twenty-first. The temperature declined 25 deg. in two days—i.e. from 80 deg. on the seventeenth, to 55 deg. on the nineteenth. Scarlet fever prevailed, with great severity, during the autumn of this and the winter and spring of the succeeding year, 1835; and it is worthy of remark that the first case (a fatal one) occurred on the 21st, or just after the extraordinary change above noted.

The sensations experienced from changes of weather are modified in three ways—first, by variations in the temperature of the air; next, by the currents prevailing in it; and thirdly, by its hygrometric state. When the air is calm, with a mean temperature and high dew point, it feels close, even with a moderate temperature; when the dew point is low—that is, when the air is very dry—it feels cold, even with a medium temperature; and if the wind blows, it is positively cold and disagreeable.

Fig. E. exhibits a remarkable decline of temperature in June, 1835. Here again the dotted line refers to the temperature and to the figures on the right; and continuous one to the barometer, and to the figures on the left.

On the 10th the thermometer stood at 80 deg., and on the 11th at 82 deg. On the 13th it fell to 67 deg., and on the 16th rose to 77 deg. It fell on the 18th, without any change of wind or any rain, to 62 deg.; and on the 24th, 25th, and 26th, the thermometer marked only 54, 55, and 53 deg. with heavy rain, being a difference of very nearly 30 deg. between the 11th and 25th of the month.

JANUARY 18, 1836.—In the evening, the atmosphere remaining free from cloud, it began to freeze sharply; and at 7 p.m. the roads were frozen quite hard, yet my thermometer has not been lower than 32 deg. Last night my thermometer did not descend below 32 deg.; yet the ground was frozen quite hard, and there was ice on all the little pools in the morning. Captain Back, in his *Narrative of the Expedition of the Terror*, has the following remark: "JULY 5, 1837.—Now ice was nightly formed in all the pools, and sometimes at the edges of the salt water, though, according to the thermometer, the temperature had only varied from 33 to 34 deg."

A thermometer fully exposed to the aspect of the sky will generally (although perfectly screened from the sun) stand, during the day, two or three degrees higher than one close by, where the exposure to the sky is interfered with by a wall or building. This difference I have often noticed, even on very cloudy days in spring or summer. On the other hand, at night, the thermometer (having a free exposure to the sky) is the lowest; and if the night is clear, three or four degrees lower.

CRITICAL NOTICES OF NEW PUBLICATIONS.

Outlines of Analogical Philosophy; being a preliminary view of the principles, relations, and purposes of Nature, Science, and Art; by George Field. Two volumes, 8vo. London, 1839. pp. lxxviii, 316, 478.

MR. FIELD'S *Outlines* form a system of didactic principles, developed with extreme conciseness and perspicuity; they are, therefore, insusceptible of farther analytical condensation. For this reason, we propose to limit our notice of this extraordinary performance to the solution of such extracts, representing his method and doctrine, as may induce the friends of "THE ANALYST" to submit the "Analogical Philosophy" to the scrutiny of their own judgment.

Mr. F. opens his "Outlines" with a general introduction, containing an exposition of his design and subject; and, as may be readily conceived, it abounds with curious and instructive observations. He believes the only remedy and corrective for that discordance of systems, which is the reproach of philosophy, to be the reverting to nature and the disregarding of whatever is peculiar in the systems and works of philosophers, while we take to our aid all those principles and developments in which they have concurred, or which all are bound to acknowledge, and to place them upon one sole foundation. As introductory to his own attempt in this important enterprise, he takes some very general surveys of the pro-

gress, fluctuations, and decline, historical and doctrinal, of the philosophy of past ages, keeping in mind that his purpose is not to write a history, but to elucidate a system of science. Ere science had a history, he observes, or philosophy a name, the human mind, unassisted by inspiration, would have made its advances through a long and oblivious period, of which there could be only conjecture. If, however, we take our view of the whole circle of art and philosophy, from the earliest periods recorded to the present time, we may clearly distinguish three grand æras in the history. The *first* was dignified by the sublime dogmas of intellect and theology, when the arts were yet in their infancy, and physical nature little inquired into or understood. This he denominates the *Æra of Intellect*, ending with the apostolic times. The *second* or middle period he names the *Æra of Sense*, when the arts attained their meridian, in the lustre of which shone a long train of geniuses, who carried the sensible arts to exalted perfection, and became models to succeeding ages. Last in the course of science came the votaries of physical nature, and theirs he designates the *Æra of Matter*, in which have arisen the luminaries of material and mechanic science, the great distinguishers of an æra which seems, in our own days, to approach its perfection.

Upon reflection, Mr. F. continues, it will be evident that the foregoing course and characteristics of the learned in philosophy have been, in effect, nearly the reverse of the character and progress of the mass of mankind, and of the natural advances of the human mind, during the same period; and that the former has been, in a great measure, determined by the latter. For, he reasons, as the first recorded æra—that of intellect—in which the learned were the moral instructors of mankind, who were then in a natural or physical state of intellect; so, on the present extreme, and in the present æra, in which the mass of mankind has become more enlightened, intellectual and artificial learning have quitted the moral, and taken the physical character; while in the middle state, and æra of sensitive art, society had emerged from savage life, without having attained any high degree of general intelligence. Herein, then, we may perceive the moral compensation of the Ruling and Divine Power, by which nature and intelligence have been balanced in the species, and sustained throughout all times for the advancement of the destination of man. The first period was principally passive or contemplative, or that of the philosophy of thought, as the latter period is active or practical, or that of the philosophy of things; and their connecting period was of a mixed character, being that of the philosophy of sensation; neither of them purely either, but predominately and in subordination: and we have, accordingly, seen the speculative philosophy of Germany arise amid the practical philosophy of the rest of Europe and the world. There remains yet, he concludes, for the progress of mankind, that philosophy should accomplish another æra, in which the influences of the three former shall be balanced and united as a whole.

Having represented the position and progress of philosophy historically, Mr. F. proceeds to consider it with regard to its doctrines only. He affirms that, as universal philosophy comprehends inherently the relations of science, and corresponds to those of man and the universe, every sect and system must partake of some or all of these relations, if it be in any respect philosophic. On this ground, therefore, he distributes the sects and systems of philosophy into three classes, corresponding to the first relations of science. *First*, that of the MATERIALISTS, whose doctrines are physically founded; *second*, that of the EXPERIMENTALISTS or empiricists, grounded upon sense and experience; and *third*, that of the INTELLECTUALISTS, established alone upon mind, as distinguished from matter and sense: and each of these is positive or dogmatical in asserting the reality of its own foundations, and negative or sceptical in doubting or denying that of the others. The universal DOGMATIST or active philosopher, therefore, is he who asserts the universal reality or absoluteness of things; and the universal SCEPTIC or passive philosopher is he who doubts and denies universally, without asserting any thing. The ANALOGIST stands intermediate to the two former, and admits a universal relative state, regarding it as the ground and medium of reconciliation between the discordances of dogmatism and scepticism. We feel desirous of having the following observations of Mr. F.'s duly considered.

"Dogmatism," he remarks, "or the regarding of things as *absolute*, has engaged philosophers perpetually in the search of simple causes, and it has given rise to the axiom that nothing can exist without a cause; but if nothing can exist without a cause, there can be no first cause, or the first cause is nothing, which is absurd. And, since things are universally relative, there is no category of cause, and no such thing as simple cause; but every effect is the result or produce of concurrence, which cannot be of one thing, but must be of *correlatives*. Hence, the First Cause is truly and philosophically a plurality in unity; and the doctrine of simple causes involves absurdity, and has no ground to rest upon. But while dogmatism impels the mind to a first cause, which it can never reach, it neither does nor can determine its species, whether it be material or intellectual; yet wanting an adequate notion of intellectual cause, it tends to materialism and atheism. On the other hand, *Scepticism*,—which comprehends the dogmatism of all other sects, and is, therefore, itself, extremely dogmatical—opposes one species of cause to another, and thereby destroys the absolute ground which it borrows from the other sects, and produces negation and suspension. Accordingly, scepticism, both ancient and modern, has sprung out of the ruins, and flourished upon the fallacies, of the dogmatic sects. It flatters not the powers of man; and though it satisfies none of the demands of reason and philosophy, but terminates in nihilism, it has operated as a salutary check to the too hasty determinations of the dogmatists, and urged to others more correct. Its inconsistencies are, what is skilfully detected of wrong, it fails from estab-

lishing of right ; and while it wars with all other sects, and totally destroys every source of dependence and satisfaction, it assumes *ataraxia*, or tranquility, as its chief object and end. But he who is most unsettled in belief or opinion, is most disturbed in mind ; and it is a fact that doubt and ignorance, in the inquiring mind, produce dejection and perturbation of spirit ; and such is eminently the effect of scepticism.

"Thus," he concludes, "dogmatism and scepticism tend alike to destroy religious and philosophic consolation and dependence, and bring reproach upon reason and philosophy : they are extremes without a mean, perpetually at variance. There is, nevertheless, a position to be attained between these extremes, wherein things are regarded as *relative*, and not *absolute* ; not as *positive* with dogmatism, not as *negative* with scepticism, but as *universally correlative or analogous*. This position belongs to Analogism, which is the *mean* for harmonizing the discordances of the sects. It demonstrates that, all knowledge being relative, the absolute is beyond its sphere, and thereby annihilates the ground of both dogmatism and scepticism, while it escapes from the extremes of confidence and distrust. More assiduous to establish true relations than to confute error, it teaches that all cause consists in concurrence, and that universal coincidence gives to the philosophic universe that consistency which universal gravitation gives to the physical—assimilating all things in unity of essence, relation, and end. It determines the scope of knowledge, and bounds it by irrefragable universal correlatives, which are the ground of knowledge, and therefore are unconditional and unknowable in essence : beyond which inquiry and dispute involve absurdity, and reason bends to that Incomprehensible Original, to whom it attributes 'all wisdom, power, and goodness'—'in whom we live, move, and have our being'—'who is in us, and we in Him'—'who is all in all'—'the Being of beings'—and 'everywhere always.'"

Mr. F. entertains the opinion that a philosophy similar, in many respects, to the *Analogical*, arose early among mankind, and was, perhaps, coeval with the literal invention of letters as the elements of speech. By a due investigation, he thinks it might be rendered apparent that this philosophy, having prevailed in the east in times of the remotest antiquity, after degenerating from its high moral and intellectual destination, laid the foundation of profane learning, and wrought from the fine senses of the ancient Greeks the sublimest productions of human genius. And, he observes, since it has conducted to art and science, and promoted the best interests of mankind, it behoves us to cherish the remains of this philosophy, and to endeavour to restore it at the root. Accordingly, he has made it the design of his "Outlines" to investigate the ground of philosophy, in quest of the principles, relations, and purposes of nature, art, and science ; while he aims, also, at supplying a deficiency of the syllogistic and inductive methods, and thereby at restoring philosophy to its original foundation and native simplicity, upon the

basis of a genuine logical analogy, which supplies the forms sought through induction, and the universals to which syllogism owes its validity. Hence, summarily, the main object of his work is, by a universal analysis, upon a single principle, to develop, or at least to indicate, the true Analogical System of the Universe, throughout its various branches—to trace it to its sacred source—and to establish, if not a totally new, yet an original and hitherto neglected, method of philosophizing by analogism, upon the ground of which, by the exhausting course of previous philosophies, philosophers are naturally impelled. We transcribe, in an ample quotation, the subsequent explanatory remarks: they begin at p. lxviii. of Mr. F.'s general introduction.

Foreseeing the probability of exceptions to his system, he states "as to any resemblance in the form of our doctrine to those symbolized by the eastern philosophers, Hermetics, Gymnosophists, latter Platonists, Cabalists, Rosicrucians, Theosophists, Behmenites, Hutchinsonians, Masonics, or Metaphysicians, we have already given the answer—that we are indebted to nature and thought only for such resemblances. Where the Mystics, in particular, obtained their dogmas, or through what compositions or corruptions of doctrines, is no inquiry of ours; all the coincidences we have with them are consequent to our preconceptions: and there is one respect in which we are directly opposed to most or all of them; namely, to really or pretendedly cloaking our doctrine in *mystery*: that which is not clearly to be understood, either as matter of fact or reason, is nothing, or of no philosophic value, for us. Nevertheless, truth may be in less danger, when obscured or veiled, than when naked or exposed; for such is the spirit of criticism, that he who writes clearly, and reaches the understanding, is likely to be *controverted*; while he who mysteriously addresses the imagination will probably be *interpreted*; for the glory of bringing to light a hidden sense in the one case, or of confuting that which is apparent to common sense in the other, no less than for the more laudable object of detecting error.

"That the philosophists have held extraordinary and sublime poetical notions, founded upon great and original truths, natural or revealed, and that there was, in times of ignorance, barbarity, and darkness, necessity or expediency for disguise, we think probable, and admit; but in times of free discussion and intelligence mysteries are not marks of wisdom, but symbols of ignorance and darkness, or symptoms of the really having nothing to disclose, under the mask of solemnity, and the assumption of superior if not of supernatural knowledge: a knowledge which (without questioning the eternal and ever-present agency of the divinity) the sanely religious and philosophic mind will ever disclaim, if by such is meant any thing not conformable to the grandest scale of regularity and order in the works and ways of Omnipotence.

"We need scarcely admonish the reader that our system is a whole, not to be comprehended without consideration, nor clearly

and adequately understood in parts, every part being of universal reference. It is hence obnoxious, in a remarkable degree, to the censure of the hypercritic, who, dipping partially into it, without having well studied it in its principles and as a whole, will meet with the most gratifying paradoxes. Nor will it be extraordinary if, on the wide scale of our inquiry, we should have committed mistakes or evinced deficiency, or that the individual sciences, as we have treated them, should be found defective; for in these times we have distinct sciences of many kinds in a state of high and extended cultivation, and a rapidity of progress in others that defies pursuit, although, it must be admitted, we have no science of science itself.

"Nor have we pretensions to extraordinary superiority of information in any of the sciences, and profess not in these "Outlines" to have settled science in any of its departments, but only to have thrown out hints whereon they may be remodelled, adapted, and improved, and to have laid a foundation for them in the doctrine of universal analogy, which gives form and consistency to the whole. We shall, therefore, be well content if the having established a principle and plan for their connexion be alone conceded to us; professing only, in humble and most distant comparison (as was professed by Pherecydes, the master of Pythagoras and father of Grecian philosophy), 'to have opened a way to knowledge, rather than to have discovered any thing.' Nor have we in any case infringed the laws of philosophizing established by the high authority of Newton, in Book III. of his *Principia*—'allowing of no more causes than are true and sufficient, attributing similarity of causes to similar effects, and regarding action and re-action universally as co-equal and opposed principles.'

"Should it seem to such as may take only a cursory view of our whole work, without looking to the solidity of its foundation, that we have indulged in a fanciful trichotomy, we must again plead its prevalence throughout nature, and that we regard all *arbitrary triads* unwarrantable, incongruous, and to be guarded against by the philosopher, as leading only to absurdity and confusion; while we maintain it to be a criterion of the genuine philosophic triad that it is either a natural fact or a necessary reason—correlative, complete, and not to be confuted. We reject, therefore, all arbitrary and fanciful triads, as impressively as the true Christian, who founds his faith upon a Divine Trinity, rejects *trithecism*; foreseeing that the former leads to the ridiculous in philosophy, as certainly as the latter conducts to idolatry and absurdity in religion, without due attention to which, the trinitarian will be exceedingly liable to fall into mystic, false, and fantastic doctrines. We have guarded, therefore, as sedulously against suffering any possible predilection to betray us into the trivial introduction of triads; but if the recurrence of genuine triads should tire attention, they may often be read unheeded without prejudice to the context; and it is borne in mind that we write neither to please the ear nor delight the imagination, but to elicit thought and understanding.

"Notwithstanding a triadic management pervades our entire system, it is not the principle, but an accident of our philosophy, from which it springs through essential reason, as in like manner, it appears amid the particulars of Nature as a fact, and throughout its whole arrangement as a universal relation; it is, therefore, a necessary form of truth, and has attended all its movements, ever since the human mind began to operate, or knowledge took an erudite form. Accordingly, triadism has a history as ancient as that of learning and science, and may be traced more extensively perhaps, than any other human recognition.

"It is not, however, with the remarkable history of triadism that we are principally concerned, nor with the instinct and superstitions by which it has been fostered, but with the truth of which it is the relic, and on which it is founded: whence it stands as a form of Christian faith; belongs, in like manner, to consciousness: is a law of Nature and an axiom of science, concerning which the ministers of religion and defenders of the Holy Trinity, in modern times, have recorded much historical and literary matter, and volumes might be swelled with instances of its instinctive application throughout the particulars of literature, science and art. There have been writers"—such as Jones of Maryland, Dr. Harrington of Bath, and Herschel the illustrious astronomer—"who have regarded it as an occasional form in Nature; but we know of none who have held it to be such universally. It was by the approbation of Dr. Harrington, that we were encouraged, thirty years ago, in the prosecution of the plan now briefly developed; and, although the triadic form of doctrine therein sprung from our philosophy, we pretend not therefore to have originated it, nor have we followed it in any case for itself, but for the true analogical reasoning and original nature to which it inherently belongs.

"Notwithstanding triadism had thus appeared, and sustained itself partially in all ages and countries by the bias of nature and tradition; and, although its prevalence had been remarked by writers in some instances of nature and science, the universal analogy in which it is founded has not been disclosed by any: and, even in the high reference of religion, it has been maintained as a mystery—an article of necessary faith alone—divinely revealed—beyond the power of philosophic solution—solitary—and entirely above reason, nature, and comprehension.

"Thus we have deemed it expedient to prelimitate concerning this form of doctrine and its history, the particulars of which might supply matter for volumes of no ordinary interest and curiosity. Our object here is, however, to anticipate any prejudice against our plan and method, which may arise from the regarding it as mere invention, innovation, or fantasy; and to protest against triadism, being held forth as the first principle and matter of our philosophy, of which it is the form and offspring only.

"But our best defence against any suspicion of fantastic doctrine, and our test of genuineness, is, that we contend no further for our

system than it may promote the interests of science, and the good of mankind, while we disclaim all zealotism and deprecate, in the name of religion and philosophy, all proselytes who are not volunteers to truth alone: for although truth acknowledges disciples, she does not of either sect or party. In attempting, therefore, the amalgamation of revelation and philosophy we have been influenced by no vain design of subjecting either to either, in any of their forms, but solely by a desire to reconcile them through truth; and although conscious of having by no means done justice to so capable a subject, yet, if we shall appear to have succeeded so far as to lead the philosophic and rational mind nearer to the truths of Christianity, we shall, without regret, have accomplished our object, not doubting that that faith in both, which most closely embraces truth, will in the end prevail, and that hence, it becomes the interest of every form of christianity to cultivate this holy alliance of reason and religion." So much, for an insight into Mr. Field's exposition of the principles which pervade his system of analogical philosophy.

Mr. Field distributes the "Analogical philosophy" into the four principal parts—universal philosophy—disciplines—analogy of the sciences—and analogy of the arts—and he otherwise arranges it into eight particular "Outlines," subdivided into chapters and sections. His numerous themes are—O. I., first principles, mesology, physiology, zoology, philology, ontology, teleology, with an ingenious synoptical table. O. II., analogy of language, signs or characters, grammar, syntax, and style. O. III., analogy of logic, subjective philosophy, logical science, dialectics, analogism, syllogism, induction, method, sophistry. O. IV., analogy of the mathematics, they are the science of measure and quantity, arithmetic, geometry, mechanics. O. V., analogy of the sciences, physics, chemistry, botany, medicine. O. VI., analogy of the sensible sciences, esthetics, plastics, chromatics, harmonics, appetitive senses, the passions. O. VII., analogy of the moral sciences, ethics, morals, politics, theology. O. VIII., analogy of the arts, science of ends, technology, technics, purposes of art, conclusion, which ends with the annunciation—that every new doctrine and practice promulgated will, in the end, stand or fall, according as it may be supported or opposed by the true decisions of reason and the correct testimony of experience, and neither by prejudice nor opinion. The very earth we inhabit, which to the eye of common sense is a plain of boundless extent, diversified by mountain and vale, is nevertheless universally acknowledged by astronomers to be a globe. Even so the universe, material and immaterial, which common apprehensions behold as unbounded, and as constituted of innumerable natures absolutely distinct and individual, must be regarded from its true intellectual position and logically as universally correlative, and identical in essence, ere man can attain the position of mind upon which depends his true moral progress, individual and social, and the right comprehension of the universe by which he is insphered, and of which God is the sovereign source, sustainer, and supreme end.

Let us now illustrate Mr. Field's mode of conducting his analogical developments with a few miscellaneous selections. He defines chemistry to be, that physical science which comprehends the *actions, passions, and effects* of all material substances; and then, having distinguished the analogy of this science, he sets apart his concluding section to be the vehicle of these important remarks.

"The sum," he says, "of our argument physically is, that as reason demands, so experience demonstrates, that all material nature depends primarily upon one sole physical agent and patient which are in chemistry an active or oxygenous and a reactive, hydrogenous or phlogistic principles, elements or powers, which occur in the productions of solids, liquids and elastics; and that, in fact, there are no other elements than powers, agency, reagency, coagency, into which whatever has been regarded as elements may be resolved. As passion is reaction and thus resolves into agency, it is manifest that all *physical existence* is ultimately grounded upon action, or an agent; *action and existence* are, therefore physically and metaphysically synonymous. In like manner, all metaphysical or intellectual existence resolves into *relations* which is the category of mind, as existence is of matter; and action and passion are universal relations as well as principles. Thus, powers, are intelligences; and into one *universal intelligence* flows all essence or existence—the ground of all things; beyond which inquiry falls upon insanity—all faculties fail—and imagination itself has neither basis nor buoyancy.

"If this theory is well founded, it affords a sublime physical and metaphysical analogy whereby God and the world become reconciled according to reason and the sacred records, whereby at the creation God, the triune Eloim, manifested himself personally in the *elements*—in *light and darkness*—in his *spirit*, whereby he separated them—in the *rainbow*, wherein he united them at the covenant—in *fire*, to Moses and the Israelites—in *lightnings and whirlwinds*, to Elijah and the people at Horeb and Mount Carmel. He whose *ministers are a flame of fire*—who is *everywhere* and in all things—whom *no man hath seen nor can see*, any more than he hath seen or shall see the elements. And this doctrine reconciles the physics and theology of the Bible according to reason and experience."

From Mr. Field's analogy of the moral sciences, we transcribe his observations on VIRTUE.

With him, "the term *virtue* has not only a universal and abstract signification, but it has an endless diversification. The Pythagoreans, who used it in the abstract, yet distinguished it into many species, had physical virtues, ethical virtues, political virtues, cathartic virtues, the oretic virtues, paradigmatic and other virtues. So we have cardinal virtues, christian virtues, moral virtues, physical virtues, in their various species, and there is no end to the race of virtues, which in abstract means power or capability to some end physical, sensible, or moral. Virtue is, therefore, whatever be its form, a term for something else; for it is an instrument or faculty,

and therefore not rationally to be regarded as a moral end. In the entire acceptation of the term, then, virtue is an efficient not of morals only, but is as various as its objects; yet has it similitude of relations in them all. Hence in agriculture as in morals, it is by *virtue* of labour and the soil that men obtain corn and wine, and all the rich produce of the vegetable creation; and for this *produce* it is that the husbandman cultivates the soil, and not for the sake of any virtue in the soil itself or in himself. If, however, an opposite doctrine were to be inculcated by the agriculturist, it is barely possible that a few fanatic grumblers might be found to cultivate the soil *disinterestedly* or for its own sake, or for its virtue independently of its produce—and such in effect is the principle of slave cultivation; but men in general could not be found from a free motive to follow such a doctrine in practice and if through any circumstances such a theory could be established in any country the practice of agriculture would there languish or cease, or at least it would not be followed upon principle, but men would till the land in agricultural demerit for the sake of its fruits, and esteem the virtue of the soil for their sake alone. Even so especially it is in morals and all ethics, when men are called upon to cultivate *virtue for virtue's sake*, and not for *happiness*: the fruit, produce, and purpose—the heavenly reward of virtue. Yet into this mistake have most of the moral sects fallen, whether Brahmin, Gymnosophist, Pythagorean, Platonist, Stoic, Rationalist or Sceptic, and many have presumed to palm it upon christianity, and oppose it to the common sense, natural instinct, and conscious reason of mankind. The moral doctrine of Moses, and that of Christ in particular, are built upon rewards and promises. The Sermon on the Mount is full of them; we are therein instructed to lay up treasure in heaven—to ask and receive—to seek and find—to knock and it shall be opened—to seek first the kingdom of God, that all goods may be added unto us, and to love our neighbour as ourself—in a word, the mighty motives to Christian virtue, are present and eternal rewards. Nor are we required, in any instances, to act from, or idolise, an abstract principle of virtue: an idolatry which the patriot and stoic Brutus justly complained had in the end betrayed him."

Self-love is a term much used, but little understood; generally, it has the misfortune to be employed as the vehicle of an unamiable or bad import. With the bulb of his "analogical philosophy," however, Mr. Field assigns to the word a less repulsive signification. His speculations on the nature of self-love, and its proper influence on conduct, are ingeniously developed and curiously illustrated. Such being the character of his doctrine, our readers may not feel disinclined from endeavouring to weigh its importance without prejudice or preconception.

Having arrived at the conclusion that virtue cannot rationally be considered as a moral end, Mr. F. pursues his analogical argument; and, at paragraph 1248, he observes, "With regard to moral motive, man cannot be disinterested if he would, and at the same time

preserve his rationality ; since a reasonable being can act only with counsel, and but with a view to some end. To put the end out of view in moral action, or to make a principle its end, is to rob virtue of its proper object. To require a man to act only from the imperative commands of duty, or obligatorily and without interest or end, gives moral motive over to necessity, and deprives it of merit, and constrains a man to act mechanically, or through external impulse—as a slave, and not as one freely engaged for hire or reward. Such specious disinterestedness deprives virtue of true moral impulse, and thereby apportioning the greater labour to the weaker motive ; and although there be something chivalrous and heroic in disinterested virtue, it is ill qualified to become a universal moral motive of mankind ; add to which, the true dignity and government of virtue belong to reason, and not to enthusiasm. The end of all moral action is *good* ; moral good is *happiness*, and this happiness, this good, and this end, are never to be lost sight of by the moralist ; in fine, *freedom to act for an end* is the very essence of morals ; nevertheless, it is evident that *duty* and *interest* and *reward* concur therein, and the Divine moralist inculcates both. We are far, therefore, from denouncing the motive of *duty*, by bringing it into subordination with *right-interest* in practical morals, and confining it to a theoretic station. We designate not, however, by the term *interest*, that gross and narrow selfishness which is improvident of our universal ultimate good, and is inimical to true self-interest, but that liberal, intelligent, and expanded selfishness which, disregarding present advantage, takes an interest in self-denial and in the good of others ; and that broadest of all selfishness which identifies man with man and with his God. We mean that ultimate selfishness by which the Divinity is above all distinguished—by which He draws all to Himself ; whence is derived the selfishness by which man also grasps at all, of which it is the pattern, and in which man errs only when, through ignorance and degeneracy, he grasps individually, materially, sensually, and blindly, for want of perceiving his genuine, best, and highest interest, in connexion with virtue and intellect. To be morally virtuous is, accordingly, imperative in the natural constitution of a truly reasonable or intellectual being. In proportion, therefore, as a man is criminal, the faculty of reason and intelligence fails him ; and the vicious act of such a man, however great he may be, impugns his understanding, lowers his rank in society, and degrades him in the order of beings.

“ We deprecate for our doctrine the obloquy attendant on a selfish morality, as commonly regarded ; but truth, and not concession and flattery, is the proper instrument of philosophy. Truly regarded, we have no apprehension of evil consequences from right-interest, which is but the duty a man owes to himself—the first and last of his duties, and that to which he is most readily inclined by his moral nature ; which, indeed, goes hand in hand with right inclination. And it is only necessary for every individual to do the best that can be done for himself, that the whole genus of

man may move morally and happily, while the ostentatious principle of disinterested and public virtue too often elevates the individual without benefiting the many; and when public virtue is not founded on individual or private worth, it springs from enthusiasm or madness, and is not at all to be trusted; for true policy and all morality, like true charity, begin at home. The ennobling power of heroic virtue may make a hero without influencing the morals of mankind, affecting them otherwise than with admiration, or envy and despair—admiration of such exalted virtue and self-devotion; envy and despair of attaining such elevation, and its soul-inspiring reward. Better, therefore, are those practical moral principles which raise the mass of mankind, and contribute less to the glory of individuals than to the honour and happiness of the species; add to which, there is nothing incompatible in the union of these motives. These principles we believe to harmonize with such a moral conduct of the individual as best ensures his own permanent good in conjunction with that of others; and we regard as extremes equally to be avoided by the moral man, that interestedness which begins and terminates in self, and that disinterestedness which deceives him with the fanatical idea of a total self-sacrifice.

“Some authorities recognize in selfishness the mainspring of human action; others have adopted it as a universal principle; none, however, have reflected that self-love is not simple, and that that may be true of one of its elements, which is false of the other. Accordingly, if we analyze *self-love*, it resolves, in the first place, into *self*; and this, separately examined, terminates in neither more nor less than *consciousness*, which is universal; and secondly, it resolves into *love*; which also, separately examined signifies, in every case, *partiality* and preference, and is the desire by which self or the same, would unite with *something out of self*, or the different. Now self, of necessity, standing first, requires no *preference*: and to deny self altogether is to quit consciousness, as he does who sacrifices life to any object of desire or love. In strictness, therefore, self-love is a contradiction, for man is indigent of what he *loves* or desires; and a man does not want himself, for *self* he has; and he will not act for the sake of self, but for something which he wants out of self, which he regards as his *good*. Self-denial is the antagonist, or opposite, of *self-love*, and concurs therewith in the moral operations of the individual, and is capable of a similar analysis; denial, in this case, signifying *rejection*, and being the will or desire by which *self* would disunite from something out of self. *Self-interest* is the same as *self-love*, for *interest* is the desire of the acquisition of, or union with, something out of self, as *self-denial* is the alienation and opposite of such acquisition and interest. As principles of moral energy, therefore, self-interest, self-love, and self-denial, concur universally, for man desires either to *receive* or *reject* in all his actions.

From this concurrence arises what may be called self-election; and *election* implies freedom or choice (that is, *free will*), and demands a right *knowledge* of good and evil, that he may elect with under-

standing that which serves his true interest or moral end—that is, choose or will his motive according to the best of his understanding. It is not self, then, or the *subject*, but the *object* of self, that he prefers or selects, and the onus of duty lies in the choice of the best objects to identify with self—that is, the least particular, and the most general or universal; and for this he is to use his self-election in the exercise of *self-love* and *self-denial*. *Self-love* is always sacrificed to *self-denial*, equally by the vicious and the virtuous, when the objects of self-election require choice; and a vice or virtue established in the mind becomes the object of self-election, habitual, hobbyhorses, and expedient to it; and to this object self-denial operates as strongly as self-love. Humanity, country, friends, family, all affections, whether of avarice or other passion or appetite, virtue or vice, gives way to this ruling object, and it becomes in their place the incentive to action. So imperative is this love of the object thus associated with self, especially if it belong to the senses, that be it lust, gaming, gluttony, or other vice, it will carry a man on to the destruction of self, regardless alike of body and spirit. Hence the expediency of engaging proper objects or determinatives of action, and of diverting the mind from bad associations of mind and body, which thus enslave the will. *Self-love*, we have said, resolves into personality, subjectivity, or self; and impersonality, objectivity, or love. And as the object or thing loved is as various as are the relations of man, so also is the subject, or self, correspondingly various: and accordingly there is a *self of the body*, a gross and appetitive selfishness; there is a self of the senses and affections, being a more refined and pathetic selfishness; and there is also a *self of the soul*, mind, or spirit, above all other self, through which the whole is rectified; an intellectual selfishness, whose good alone is purely moral, connecting the good of the individual with the good of all through will, and mounting to the love of God. Hence the passions enter not into the perfection of moral motive, which is to be virtuous from good will, without the incentives of fear and hope; and good will is the willing of good, which is the highest moral end, and terminates in religious love, which divides itself into the loving of God, the universal Being, with all our hearts, and our fellows generally as we love ourselves individually. And he only truly loves himself, and is most of all himself, who exercises his whole self-love through his moral, and not through his physical self. It is then that the principle of self surmounts in dignity and importance the more specious principle of disinterestedness and public virtue, and that the love of happiness, if it be not the same in effect as the love of virtue, assumes a more soul-exalting influence in morals. If, on the contrary, morality required that an individual should seek the good of others disinterestedly, and not for his own good, and that we should love others in preference to self-love, this could only be by the loving and acting of every one for another, or for others, or for all; and what would be the gain? For in proportion as love and service are divided, they become weak-

ened; and if every man justly love and serve himself, all will be loved and served. Just as, if every man reformed his own conduct, all would be morally and politically corrected. Whereas, by inattention to self in these respects, and in place thereof, by vain endeavours to control others into right and good, counteraction arises, and, although good be sought, thereby nothing but disorder and evil can ensue, as the revolutionary principle of public utility has evinced; and as the adoption of philanthropy as a motive (however good in its relation) has also, by degrading private charity, which is so self-ennobling to the heart. Had the Divine Author of our being formed us upon such a plan, confusion only could have followed, but, with all-seeing wisdom, He implanted in every breast *self-love*, so called, and made *rectitude* or virtue the condition of its accomplishment; commanding us Christians, and all men, to love Him with all our soul, heart, and strength, and our *neighbours as ourselves*, and to love even them that hate us. In fine, this principle of self-love or self-regard is universal. In politics, it is that upon which nations professedly, and without hypocrisy, act towards each other, however deficient of wisdom and benevolence they may have been in practice; and in *religion* it is, finally, the principle of God in the creation and preservation of all things for His own glory and good, administered though it be with all His attributes of perfect power, wisdom, and benevolence: from the time 'when He laid the foundations of the earth, He rejoiced in His works, when the morning stars sang together, and all the sons of God shouted for joy.' This principle, then, exalts us to God, and is far above any principle of disinterestedness, public virtue, patriotism, or philanthropy, which are but as parts to the whole, however partially admirable or questionably sincere they may be, and however suitable under circumstances, when inculcated in the way of discipline, are very inadequate as a doctrine, and very inefficient in practice or energy. The self-love, then, that we advocate, merges into, and identifies itself with, the love of God and of all that is His; and thereby it escapes from that gross and reprehensible passion which bounds itself within the narrow sphere of physical individuality."

Mr. Field's "analogy of religion" is an elaborate and extraordinary exposition of doctrine. He represents theology as the highest of the ethical sciences, the pinnacle of all science, it being the science of the relations of created intelligences with the self-subsistent intellect, or of human consciousness with the divine, or of Man universally with God. Hence, he conceives that all religious effects depend upon the concurrence of the will of man with the will of God. An inquiry, therefore, concerning the true signification and conception of Deity is the *first* essential of theology; *next* to which is the inquiry into the nature of Man and his relation to God; and *lastly*, to these succeed the forms of the science, and the logical modes through which Man seeks the knowledge of God on the ground of science, in harmony with divine revelation. Without such *first* inquiry, the chief object of religion—THE SUPREME BEING—though

universally acknowledged, must be very inadequately and variously conceived; without the *second*, Man and his relations to God must be as inadequately and variously understood; and, without the last, Man can have no clear comprehension of religion, and no certain or sufficient foundation for his faith. Hence, again, he adds, the innumerable objects of adoration—the various denominations under which the Deity has been worshipped in different ages and countries—the strange rites and many forms of theology—and the endless variety of religious creeds and opinions. On inquiring into the signification of the names and epithets by which the *Supreme Being* has been designated, Mr. Field “finds it resolve in them all into that originality and universality through which we attain to God, and beyond which there is no conception. Such are the *Almighty*, the *Omnipotent*, *Jehovah*, the *Universal Essence*, *Eloim*, the *Creator*. This originality and universality is also implied in the relative names of *Father*, *Lord*, and the like; and it is also expressed by the terms *Omniscient*, *Omnipresent*, *All-bountiful*, by which we denote the attributes of Deity; and when men ascribe to God *power* in his principles, *wisdom* in his means, and *goodness* in his purposes, these terms are understood *universally* and *underivedly*. In like manner, all the incommunicable attributes of God—His self-subsistence, absoluteness, unity, simplicity, eternity, immensity, immutability, indefatigability (for He only is either or all of these)—are understood as original, universal, and final. As the *Most High*, we denote *Him above all*; and, when He is called *The Eternal*, He is but designated by the attribute of *Time universal*, not only as *eternal*, but as *sempiternal*—both without beginning and without end. Hence, we may conclude that the term God, in its most extensive and comprehensive sense, is synonymous with *Universal* or *Original*, *Final*, and *Supreme Being*. Again, the highest and most comprehensive of all conceptions to which the mind of man can be elevated by the powers of understanding and philosophy, is the *totality* of things, internal and external—that in which *all* is united, or wherein *all* things exist—the *Subject of all objects*—the *Universal Essence*—the *Sole and Supreme Being*—the bound of all conception and consciousness—the Spirit of all. But this is the *God of reason and science*, who, like the GOD OF REVELATION, ‘in whom we live and move and have our being,’ is One and indivisible; the Sovereign LORD of the Universe, who created *all* things by His power, preserveth *all* things by His providence, and ruleth *all* by His wisdom. We have previously shewn that all things, individually and collectively, resolve into three incorporeal principles, or essences, each absolutely and reciprocally essential to the others, and there is nothing conceivable independent of this co-relation. The Universal Self-subsistent Being, the God of Reason and Science, like the God of Revelation, is therefore *Triune*, yet not *three* gods, but *One God*; and every natural object becomes a symbol of Divinity—of that *Triune ELOIM* who created light, darkness, and the elements, by His word, and formed

the world and man in His own image, from His own being, of His own will, out of nothing."

According to Mr. F.'s method of philosophizing analogically, he sets down the propositions as demonstrated—*First*, that, in a physical view, the elements of matter are powers essentially immaterial; that the physical universe resolves into *one all-powerful agent*, the source of all other powers and of all existence; and that the physical and material world is subordinated to the moral and divine. *Second*, that between the physical and intellectual, or material and moral views, throughout the world of sense, all the loves and aversions of animate nature are ruled by *one all-connecting harmony and love*. *Third*, that, in an intellectual view, thought is a *unifying* process; that in whatever way man attains knowledge, it is by this process, and by *uniting* his thoughts; that the result of thought, in every course, is a *unity*; and that, in fine, the last attainment of all thought is an absolute *Universality*, one intelligible intellect, an all-comprehending consciousness. Adopting the establishment of these propositions, Mr. F. goes on to say—

"Thus, in the natural course of the mind, the pure idea of ONE LIVING GOD is the *last* attainment of human knowledge, utterly inconceivable in the early state and progress of man, and unattainable through any course of idolatries, till manifested in mercy by Divine Revelation, of which it stands in Holy Writ sublimely *first*—'In the beginning, God!' Of essences, elements, and first principles, in themselves, we know nothing, since they are not the conditions of knowledge itself, but only their effects and attributes: hence the attributes and effects of the Universal Essence can alone be known; and the God of reason, like the God of revelation, is *ineffable, and incomprehensible in essence*—the Being of being. In universal principles, we comprehend *all powers*; in universal relations, *all wisdom*; and in universal purposes, *all good*; and these are the prime attributes of God. Thus, God has goodness, which *is* the best; wisdom to *know* the best; and power to *do* whatever is best and fittest to be done; and these connect the moral and physical attributes of God in one, philosophically and universally. And in like manner we universalize all other attributes of the Divinity, to whom nothing can be truly ascribed with limitation. The God of reason then, is that infinite and sole Absolute Being—the triune Essence of all—which the universal conception of the universal system points to, but does not make known otherwise than symbolically through his works and energies. Hence, conceptions of God and his attributes can be acquired in intellectual, sensible, and material nature alone; whence arise the personification of God and the Divine Hypostases and attributes, whereby vulgar conception is assisted, and at the same time inclined to idolatry, when unsupported by the juster and more expanded views of universal science and Divine revelation."

Mr. F. then proceeds to trace, although in a manner somewhat discursive, the idea of a God to universality through names and attri-

butes philologically—through the faculties of the understanding categorically and logically—through existence and consciousness ontologically—and through the whole analogically. He next takes for a subject of inquiry, the *God of Nature* to whom man attains, through experience and physical analogy, or naturally; for, he says, man arrives at something necessary and underived, the ground of all cause—eternally progressive—indefatigable because irresistible—and all this, because to negate is to affirm, and non-existence is inconceivable. There is therefore, he concludes, a

“*Universal Relative Being*, eternally generating and producing—the beginning and great end of all—whose energies and acts appear to be throughout nature, the development of intellect and being, circulating or returning to its immortal source, and thence regenerated, and sent forth in renewed energy and production, analogous to the ethereal circulation by which the material universe appears to be produced, actuated and sustained physically. This view of Deity terminates also in spirituality, and thereby escapes from Pantheism, which makes of nature a physical God; and it identifies itself also, in the end, with Revelation: whence arises the powerful influence of the literature and teaching of the christian Physico-theologists in leading minds through common sense, taste, nature, and science, to the portal of pure Christianity. *Holy, holy, holy—thrice holy—is the Lord of Hosts: the whole Earth is full of His glory.* Such is the God of nature and the eternal to whom man attains, through intrinsic reason, analogically: for if consciousness and existence are identical in essence, and their primary effects are alike mutually causal or concurrent, then are they not only identical in essence and original, but they are also co-essential. There is, therefore, an Original Being, the source and sustenance, or substance of all consciousness, relation, and existence, and this Being is the God of reason and nature, and such also is the God of Scripture and of Christian theism, the God of whose universal essence man has the same evidence as he has of his own individual essence soul, or consciousness: nor do we assert nevertheless, that the universe is God, for his Essence lies beyond all, the cause of all. There was a similar spiritual tendency in the theology of the purest and sublimest of the Greek philosophers who theorized upon the intellect, and whose doctrines have been infused into christianity and accord remarkably with the more spiritual evangelism of St. John, the approved disciple of Christ: and also with the Christian philosophy and apostolic doctrine of the most learned of the apostles, St. Paul. The Pythagoreans deified numbers: but the Platonists deified the whole of the science: both, indeed, refined upon the material gods of idolatry, and the sensual gods of their mythology, by sublimating their divinities above Intellect and the intelligible into the Scientific—nearing, but missing, the pure spirituality of Christianity. Upon the whole then, philosophy requires and demonstrates in perfect accordance with most ancient christian creeds, *One Universal God in Trinity, and*

Trinity in Unity of three co-essential, incorporeal subsistences, modes, forms, personalities, or hypostases, whose essence is ineffable and transcends comprehension, and who exhibits himself everywhere to the pious philosophic eye, infinite and eternal, omnipotent, omniscient, and omnipresent,—universal in power, wisdom, and goodness—undefatigable, indigent and ignorant of nothing, and incapable of evil or of error. Such also in nothing differing, is the God of Revelation, who has declared himself the Great Existence—the “I AM”—the Sole Existence—‘Beside one there is nothing unknowable;’ for ‘no man shall behold my face and live.’ Thus, even to the most favoured, as it was in Moses, the view of God is posterior only, or through his works and ways, and not by prior or immediate vision.”

Mr. Field prolongs his “analogy of religion” to a complete and surprising development, and his views expose to critical theologians a subject of profound and difficult investigation. We might bring before them, for studies, various other important extracts; but, our limits being exceeded, we ought to conclude this lengthened article. Nevertheless, we must indulge our desire to adduce one illustration of the author’s theological doctrines; and this we hold to be appropriately introduced into a scientific journal. Having expatiated on the philosophy of religion which builds, upon the ultimity of reason, a firm foundation for faith, he further observes—

“But the man exercises faith unlawfully and through indolence, who yields it to things which are attainable through reason, and ordinary thought and experience: for faith should be the resort and dependence of the soul, where it is bounded by nescience, or the ignorance that succeeds to knowledge. True faith is the conviction or consciousness of things which lie beyond the boundaries of reason and experience, and comes in aid when and where these faculties fail us; ‘for by wisdom man hath not known God.’ As the Author of reason would not do that which is against reason, and as revelation is from God, and reason is the principle in man upon which the extreme of faith in God depends, revelation must go hand in hand, if we would not absurdly entertain the one without the other. It has accordingly been the aim of the best and most enlightened divines and fathers of the Christian Church to support the accordance of revelation and philosophy, and to place the doctrines and faith of christianity upon the ground of universal reason. And, happily, true reason is the rock of christianity—upon which it was first established—with which it has weathered all storms—and, by the strength of which, it will be undoubtedly sustained for ever. Of *reason*, the first of these powers, we have this unquestionable evidence, that christianity, after being rejected in its native country by the degenerate of Israel, although founded on pure Judaism, was first established, in despite of prejudice and human authority, among the Greeks and Romans, the most powerful, intellectual, reasoning, scientific and celebrated people that the world had thitherto pro-

duced, and who were undoubtedly prepared for such an advent by that Divine Wisdom which inspires man, in all times, to reason and know truly.

"*Revelation*, the second of these powers, is incontestible ; for who will question the power with which Christianity has resisted the blasts of ancient and modern infidelity, grounded on the illogical assumptions of atomism and sensualism ? Or who will deny that it has been professed by the most truly distinguished geniuses of its entire period, and proclaimed by the most enlightened of modern nations, till in the end its true faith and practice have become the only sure test and sign of refined manners and pure intelligence, not only in individuals, but throughout the species ? And while intellect, learning, and humanity, have declined with its corruptions, and civilization has invariably advanced in the wake of Christianity, barbarism has attended and followed all other creeds. And that Christianity would be sustained for ever we have prophetic assurance in the continual advancement, purification, and discoveries of science—always approaching and constantly revealing confirmations of Scriptural evidence and faith ; till reason and Divine revelation, which are one in truth, shall have established their essential conjunction in holy and eternal alliance. Nevertheless, as a disgrace to learning, it is to be deplored that the intolerant spirit of religious controversy should have occasioned, by a sort of common consent, the expulsion of religion from the social precincts of science ; thereby degrading the sublimest of human knowledge, and rendering religion an outcast, for the sake of a truce that cannot promote a philosophic spirit, and will not fail, if persisted in, to effect the total neglect and extinction of religion among the learned. But the tie of reason and Divine Revelation is indissoluble, and they will not for ever suffer their first-born to be banished from the household of science. Upon the whole, we cannot doubt that the result of revelation and genuine philosophy will ever be found the same, each accomplishing the ends of Infinite Wisdom and Goodness, each confirming the same wise and benevolent plan, and holding out the same temporal and eternal advantages to mankind."

As serving to indicate the design and subject of his "Outlines," Mr. Field states that its earliest and constant incentive has been the desire of answering the very natural inquiry of every thinking being—what is the universe in which he finds himself ? what are his relations therein ? and what are the purposes of the whole ? From the endlessly varied constitutions of mind in man, it is obvious that unanimity cannot distinguish the judgment which will be pronounced upon his execution of this most delicate and comprehensive enterprise. This, however, must be generally the sentiment of every person qualified, by education and study of Mr. F.'s doctrines, to pronounce an opinion on their merits—that he has executed his undertaking with the most commendable moderation in dealing with other systems, and with exemplary modesty and candour in advocating his new method of

"analogical philosophy." For our own parts, we cheerfully acknowledge our sincere gratification in applauding the pious and just philanthropy which pervades the scheme and development of his doctrine, with its prominent tendencies to the improvement of education, and the culture of pure religion in harmony with its rational and revealed foundations—its tendencies, indeed, to maintain religion in its natural and heaven-ordained supremacy of being the principal and inseparable object of instruction and discipline for Man, in all the stages of his journey through life, from the cradle to his grave. Mr. Field's "Outlines" manifestly belong to a class of writings elevated immeasurably above those gossiping and flimsy compilations which are exerting the spectral noxiousness of a nightmare in debasing the character of modern literature. His system is distinguished by the fairest lineaments of order and symmetry, of erudition and reflection; by comprehensiveness of design, consistency of elements, and completeness of demonstration. We foresee that it will supersede all others as a standard in guiding the ingenuous mind of youth in the attainment of a purified religious and scientific education—of right instruction in the principles of our national faith, and the philosophy of nature and truth.

OUTLINES OF PERIODICAL LITERATURE, RELATING TO THE NATURAL SCIENCES & PHILOSOPHY.

(Continued from page 354).

The Magazine of Natural History, and Journal of Zoology, Botany, Mineralogy, Geology, and Meteorology, conducted by Edward Charlesworth, F.G.S. 8vo, London, 1839.

SUPPLEMENTARY PLATES, SEPTEMBER, 1839.—These are numbered V, VI, VII, VIII, and IX of the series. The two first exhibit very interesting and admirable views of *Argonauta argo*, the paper nautilus, shewing the mode in which the shell is embraced by the animal's two palmated arms. On No. VII, are represented eleven shells from the crag, in Mr. S. V. Wood's cabinet: the whole are *Bullæ*, and seven in the list are new species—*Bulla quadrata*, *B. calenata*, *B. dilatata*, *B. ventrosa*, *B. concinna*, *B. subtruncata*, *B. olivula*; the remaining four being *B. lignaria*, *B. conulus*, *B. cylindracea*, and *B. obtusa*. No. XXXIII of the Magazine contains their descriptions. No. XXXIV, OCTOBER, 1839.—With the first section of an excellent article on the natural history of *Cricetus frumentarius*, the marmot or hamster, Dr.

Weissenborn opens this month's publication; and he is followed by Mr. Clarke, with a fresh portion of his illustrations of the south-east Dorsetshire geology: they are accompanied by four graphic figures. Mr. Westwood communicates some descriptive observations on Hymenotes, a genus of exotic orthopterous insects: he describes four species—the *H. rhombea*, *H. triangularis*, *H. sagrai*, and *H. platycorys*, and represents their specific characters with six figures. A notice is furnished, by Mr. Wetherell, of some undescribed organic remains lately discovered in the London clay formation:—they are delineated in plates viii and ix of the “supplementary illustrations.” Next, you find four “reviews;” the last of which gives a brief account of Prof. Ehrenberg's magnificent work on the Infusoria or microscopic animalcules, which he regards as perfect organisms. From this review, you learn that the illustrious author has succeeded in establishing two great natural laws—1, that the animal organization is perfect in all its principal systems, to the extreme limit of vision, assisted by the most powerful microscopes; and 2, that the microscopic animalcules exercise a very great and direct influence on inorganic matter. We transcribe the following summary, as being abundantly curious and interesting to naturalists:—“1. Most, probably all, microscopic animalcules, are highly organized animals. 2. They form, according to their structure, two well-defined classes. 3. Their geographical distribution in four parts of the world follows the same laws as that of other animals. 4. They cause extensive volumes of water to be coloured in different ways, and occasion a peculiar phosphorescent scene of the sea by the light they develop. 5. They form a peculiar sort of living earth: and as 41,000,000 of them are often within the volume of one cubic inch, the absolute number of these animalcules is certainly greater than that of all other living creatures taken together; the aggregate volume is even likely to be in favour of the animalcules. 6. They possess the greatest power of generation known within the range of organic nature, one individual being able to procreate many millions within a few hours' time. 7. The animalcules form indestructible earthen, stones, and rocks, by means of their siliceous testæ; with an admixture of lime or soda they may serve to prepare glass; they may be used for making floating bricks, which were previously known to the ancients; they serve as flints, as tripoli, as ochre, for manuring land, and for eating, in the shape of mountain meal, which fills the stomach with a harmless stay. They are sometimes injurious by killing fish in ponds, in making clear water turbid and in creating miasma; but that they give rise to the plague, cholera morbus, and other pestilential diseases, has never been shown in a credible manner. 8. As far as observation goes, the animalcules never sleep. 9. They exist as Entozoa in men and animals, the Spermatozoa not being taken into consideration here. 10. They themselves are infested with lice as well as Entozoa, and on the former, again, other parasites have been observed. 11. They are, in general, affected by external agents much in the same manner as the larger organic beings. 12. The microscopic animalcules being extremely light, they are elevated by the weakest currents, and often carried into the atmosphere. 13. Those observers who think they have seen how these minute creatures suddenly spring from inert matter, have altogether overlooked their complicated structure. 14. It has been found possible to refer to certain limits or organic laws the wonderful and constant changes of form which some of these animalcules present. 15. That the organism of these

animalcules is comparatively powerful, is evinced by the strength of their teeth and of their apparatus for mastication ; they are also possessed of the same mental faculties as other animals. 16. The observation of these microscopic beings has led to a more precise definition of what constitutes an animal, as distinct from plants, in making us better acquainted with the systems of which the latter are destitute." This month's editorial article relates to the biography of Dr. Smith, "the father of English geology," to the proceedings of the British Association, to the supplement to M. Agassiz' fossil fish, and to an epistle of Sir James Alexander's concerning his African discoveries. You are then conducted to *November* by four "short communications," being a note on Dr. Smith's death, account of a migration of dragon-flies in Germany, the existence of a toad without food for three years, the capture of a large saw-fish, and the cuttings of the Eastern Counties' Railway.

NO. XXXV., NOVEMBER.—M. Sander Rang, in a memoir on the Argonaut, adduces evidence in support of the following positions—that the ancient belief respecting the skilful manœuvres of the poulp of the argonaut in progressing, on the surface of the water, by the help of sails and oars, is false ; that the arms, which are provided with membranes in the poulp, have no other function than that of enveloping the shell in which the animal lives, and that for a determinate object ; that the poulp, with its shell, progresses in the open sea in the same manner as the other Cryptodibranchial cephalopods ; and that, when at the bottom of the sea, the poulp creeps upon an infundibuliform disk represented by the junction of the arms at their base, covered with the shell, and the part reputed ventral above ; having, in this posture, the appearance of a gasteropodous mollusc : it is represented in Plate VI of the supplementary illustrations. Another portion of Dr. Weissenborn's natural history of the Hamster, containing remarks on its propagation and its enemies, comes next ; and then you have Mr. White's descriptions of two hemipterous insects—the *Graphasoma wilsoni*, and *Plataspis coracina*—with figures : to these, he adds notices of the *Coleotichus costatus*, *Calliphara bifaciata*, *Calidea parentum*, *Tectocoris childroni*, and *Caliprepes grayii*, briefly specifying their characters. In a continuation of his systematic Catalogue of the Fossil Plants of Britain, Mr. Morris registers forty species of the *Neuropteris*, and fourteen of the *Odontopteris*, designating their localities, and the books on mineral oryctography. Mr. Newman begins his Notes on Irish Natural History : this note relates chiefly to the alpine and palustrine ferns ; next, from the pen of Mr. Jelly, comes an article on the fossil shells of the genus *Madiola*, frequently found in the Bath oolite, inclosed in the shells of the genus *Lithodomus*, with three well-defined figures in illustration ; and you arrive at Mr. Bedford's account of the strata of Lincoln, from a recent survey, commencing north of the cathedral, and descending to the bed of the river : twenty-six beds are here distinguished. Mr. Couch offers some ingenious original remarks on the structure and habits of the *Holothuria physalis*, or Portuguese man-of-war : a valuable contribution to zoögraphy. One hundred and four specimens are enregistered in Mr. Flower's catalogue of some of the most interesting plants collected in the neighbourhood of Swansea during the last summer : and, from the contemplation of these, you proceed to the ten short communications, on which you may keep pondering until the arrival of

NO. XXXVI, DECEMBER, which concludes the third volume, *new series*, of the Magazine of Natural History. Mr. Newman resumes his notes on the Irish ferns, and intersperses them with numerous agreeable and usefully descriptive observations; and, with an account of the animal's hybernation, injury, and use, and methods of destruction, Prof. Weissenborn completes his natural history of the hamster. Mr. Thompson succeeds, not inappropriately, with zoological notes on a few species obtained from the south-west of Scotland. These are, *Sorex castaneus*, the chestnut shrew; *Arvicola pratensis*, the bank vole; *Lestris pomarinus*, the pomarine skua; *Gobius bipunctatus*, the two-spotted goby; *Labrus variabilis*, the variable wrasse; *Liparis montagui*; *Syngnathus equoreus*, the equoreal pipe-fish; *S. lumbriciformis*, the worm pipe-fish; *Octopus octopodia*, the eight-armed cuttle; *Lithodes maja*, the horrid crab; *Porcellana longicornis*, the long-horned crab; *Galathea strigosa*, the plaited lobster; and *G. rugosa*, the long-clawed lobster. Mr. Birch's article on the monkeys known to the Chinese, from the native authorities, forms the first section of a very curious communication: and this is followed by an additional portion of Mr. Waterhouse's observations on the Rodentia, with a view to point out the groups as indicated by the structure of the crania, in this order of the mammalians: he treats here of the *Arvicolidae*, which constitute his fifth family, giving seventeen figures in illustration. Mr. Buist contributes a short but distinct description of the pupa of the *Nerodes littoralis*, with two graphic representations; and these bring you to the six "short communications" to the close of MDCCCXXXIX.

The London and Edinburgh Philosophical Magazine and Journal of Science; conducted by Sir David Brewster, F.R.S. Richard Taylor, F.G.S. and Richard Phillips, F.G.S. 8vo, London, 1839.

OCTOBER, MDCCCXXXIX.—Mr. Lyell introduces you to the philosophy of this month with an important descriptive communication on the tubular Cavities filled with gravel and sand, called *Sand-Pipes*, in the Chalk near Norwich, with three very fine illustrative sketches. From the facts detailed by him, Mr. L. concludes—that the chalk had been removed by the corroding action of water charged with acid; that the excavation and filling of the pipes were gradual and contemporaneous processes; and that the strata of the Norwich crag had been already deposited upon the chalk before the excavation of the sand-pipes. A memoir on the use of a secondary wire as a measure of the relative tension of electric currents, is furnished by Prof. Draper, and illustrated with figures and tables. Six figures illustrate the next article, which is—observations by Mr. Craig on the Configuration of the scales of Butterflies' wings, as exhibited in the microscope. Four short papers follow; they are titled—a new method of distinguishing arsenic from antimony, in cases of suspected poisoning by the former substance, by Mr. Marsh; an account of a few independent notices of America by middle-age writers, by Mr. Halliwell; Mr. Rigg's correction of Prof. Thomson's corollary; and Prof. Kersten's notice respecting Lanthanum. You then have a valuable paper of Mr. Grove's on a small voltaic battery possessing great

energy; on voltaic combinations and forms of arrangement; and on the inactivity of a copper positive electrode in nitro-sulphuric acid; with a plate. Next in order, stands Mr. Williams' observations on the geological position of the Culm and Plant-bearing beds of Devon and Cornwall. Another section of Col. Wright's meteorological observations, includes a contribution of the same kind from Prof. Jameson; and these elaborate tables are followed by an ingenious prize-essay of Mr. Ferguson's on the cause of the Holes that perforate sheets of melting ice. The next articles are Mr. Thompson's on the separation of lime from magnesia, and on the assay of gold; and Mr. Drach's on the use of barometrical formulæ for determining the heights of mountains. For proceeding of learned institutions, those of the Royal Society are fully given; they are numerous and very valuable. The intelligence and miscellanies consist of six articles; and, with these and the meteorological observations, this Month's contributions to Science are completed.

NOVEMBER.—Prof. De Morgan's rule for finding the value of an annuity on three lives, is the first paper in this month's publication. The next is the conclusion of Dr. Draper's memoir on the use of a secondary wire as a measure of the relative tension of electric currents, with nine illustrative tables. Prof. Forbes' interesting communication on the application of Electro-magnetism as a motive power, would lead to the hope that ere long this power may be employed extensively and effectually in propelling engines and ships: Mr. Davidson of Aberdeen has made great progress in perfecting machines for rail-roads, on this new principle. Mr. Lubbock gives an elaborate development of his views on the wave-surface in the theory of double refraction; and, after this, which exhibits some remarks of Mr. L.'s respecting the existence of axes of elasticity, Dr. Faraday communicates the fifteenth series of his experimental researches in electricity: in this section of his inquiries, the illustrious electrician contributes a most curious and important notice of the character and direction of the electric force of the Gymnotus: he has attained every proof of the identity of the animal's power with common electricity. Mr. Cooper sends a paper of observations on shooting stars; and this precedes another division of Col. Wright's meteorological observations in Colombia; and this again precedes Prof. Forbes' letter on the polarization of heat. In a note to the Editors, Mr. Townson distinguishes the proper focus for the "*Daguerresotype*," a monkey-looking, horrid-sounding term for the art of photography: he explains this as an important fact which has hitherto escaped observation. A continuation of Mr. Ivory's Bakerian lecture follows: in this, he treats of the theory of astronomical refractions, and subordinately on atmosphere of air mixed with aqueous vapour. Those of the "Geological" are recorded for the proceedings of learned societies: the report is copious, and embraces a diversity of instructive outlines of papers. Four articles of intelligence and miscellanies bring you to the meteorological observations and table, with which the "*November*" is concluded.

Annals of Natural History: or Magazine of Zoology, Botany, and Geology; conducted by Sir W. Jardine, Bart., P. J. Selby, Esq., Dr. Johnston, Sir W. J. Hooker, and Richard Taylor, F.L.S. 8vo, London, 1839, with graphic illustrations.

No. xxii, OCTOBER, MDCCCXXXIX.—Prof. C. Morren introduces the *Annals* of this month with an admirable essay on the *Discoid Piths* of plants. He illustrates his interesting subject with a finely executed plate representing sections of the *Begonia argyrostigma*, *Juglans regia*, *Jasminum fruticosum* and *Phytolacca decandra*, which exhibit very beautiful appearances under the microscope. The first portion of Dr. Philippi's *Zoological Notices* forms the second article, containing five contributions to natural history. 1, Two new species, the *frondosus* and *cirriger*, of *Euplocamus* described. 2, Remarks on the animal of *Pileopsis garnoti* which "differs essentially from the *Patella*-shell." 3, On the animal of *Galeomma*, the *Parthenope formosa* of Scacchi, in his zoological observations. 4, On the *Oculina ramea* and its inhabitant. 5, On the *Chelura terrestris* a new amphipod, here minutely characterized. Next come additional extracts from Mr. Tweedie's rough Notes of a Journey across the Pampas to Tucuman in 1836—communicating much valuable botanical information. After this, Mr. Maclean's route from Lima, by the Quebrada of San Mateo, is exhibited in a tabular form, with thermometrical and hygrometrical notations. Mr. A. Cunningham* gives another portion of his Botany of the New Zealand islands: this makes the number of his species 622; and, in a foot-note, six rare or uncharacterized species of *Pittosporum* are described. Four bibliographical notices are followed by the proceedings of the Zoological, Botanical, and Wernerian Societies, and the British Association for the advancement of science. Three miscellanies, with the meteorological observations and table, bring you to

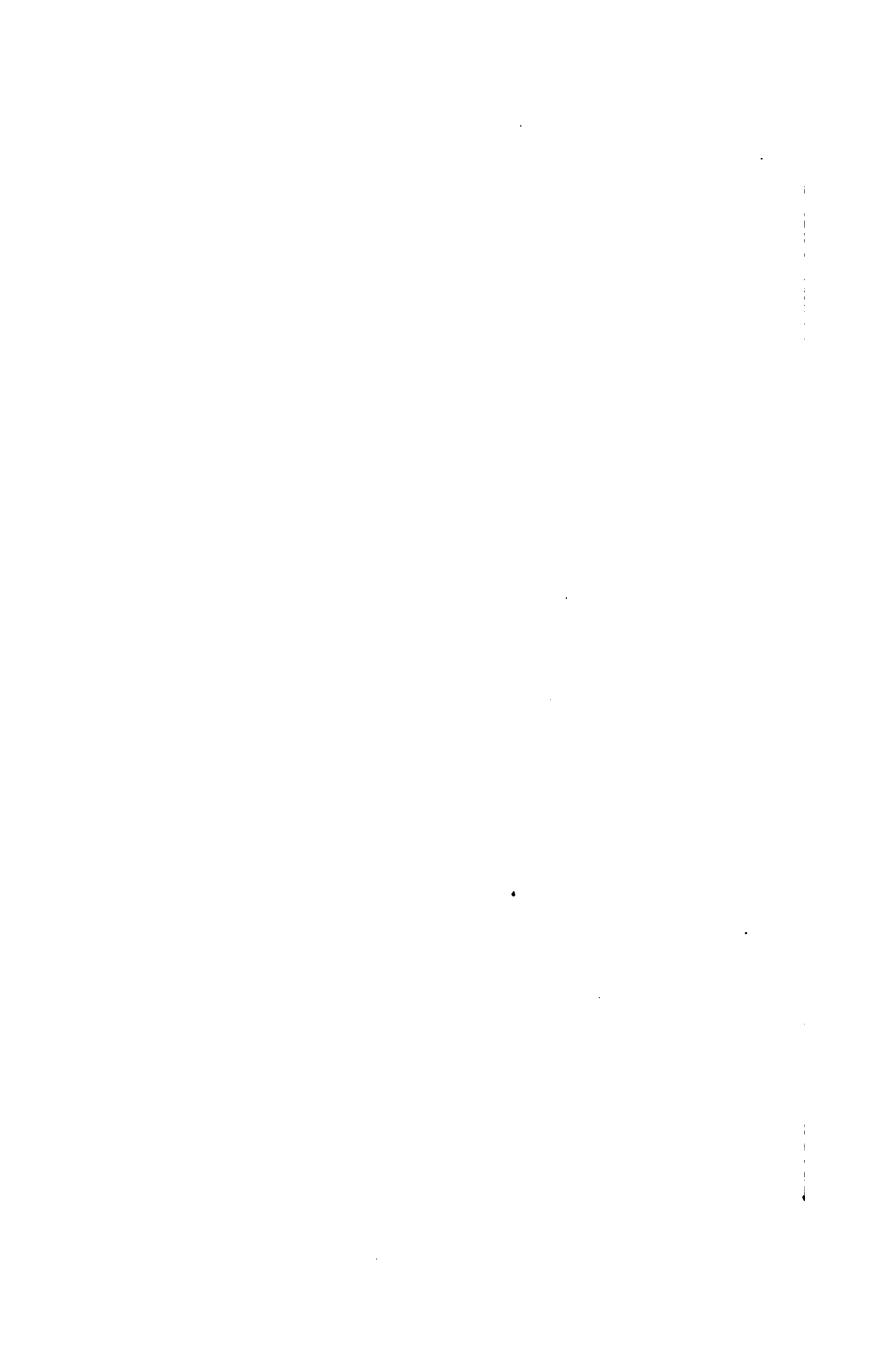
No. xxxiii, NOVEMBER; and, at the head of its contents, you find M. von Baër's curious description of Animal Life in Nova Zembla, from personal observation. Next in the list, stand Mr. Berkeley's remarks on the *Lycopodon*, *Phallus*, and their allied genera, with a plate illustrative of their fructification, and exhibiting twenty-six figures, all, except the nineteenth, more or less highly magnified. Under the title, *Horæ Zoologicae*, Sir William Jardine proposes to bring together, in a series of short papers, the zoological information which may occasionally come into his possession; and, for a commencement, he furnishes the practical observations of Mr. Kirk, a correspondent, on the history and habits of the *Crotophaga*, for some reason, denominated the "*Old Wife*" in the West India islands. Another section of Mr. Tweedie's extracts from *Rough Notes of a Journey across the Pampas of Buenos Ayres to Tucuman, in 1836*, brings the account of observations

* It is with much regret we announce the death of Allan Cunningham, Esq., the botanist and traveller, who departed this life at Sydney, New South Wales, on the 27th of June, in the 48th year of his age, after a lengthened illness, which he contracted during the rainy season in New Zealand in 1838, whither he had gone on a botanical excursion, previous to his intended return to England with the result of many years' journeyings.—NEWSPAPER.

and adventures to a conclusion. From Dr. Wight's researches, you derive a valuable communication on the *Laurus cassia* of Linnaeus, and the plants producing the cassia-bark of commerce: it is produced, he believes, "by nearly every species of the genus." Mr. Lyell's paper on the discovery, in the Cranbourn crag, of fossil teeth of a leopard, bear, and other animals, is illustrated by six figures; and this is followed by another from the same naturalist, on the occurrence of fossil quadrumanous, marsupial, and other mammalians, in the London clay, near Woodbridge. Mr. Owen then describes some mammalian remains found at Kyson; these are, the molar of a *Macacus*; a portion of a jaw, with one of the false molars, of a mammiferous species, probably allied to the *Didelphys*; and two molars of a small mammalian, most nearly resembling those of the insectivorous bats; represented in five figures. As information respecting botanical travellers, you have an account of Mr. Schomburgh's recent expedition in Guiana; this most enterprising and fortunate naturalist has arrived in England in safety. In bibliography, there are three notices; and then come the proceedings of the zoological and botanical societies. Four miscellanies follow, and the number for this month closes, as usual, with the meteorological observations and table.

. We regret to be compelled to omit, for want of space, analytical notices of "The Phrenological Journal and Magazine of Moral Science," the "Edinburgh Medical and Surgical Journal," and the "Annales des Sciences Naturelles." They shall, however, be attended to in our next number.

END OF THE TENTH VOLUME.



100

100

100

100

